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http://www.stn-international.com/archive/presentations/DWPIAnaVist2_0710.p

FILE JAPIO
FILE LAST UPDATED: 25 SEP 2007 <20070925/UP>
FILE COVERS APRIL 1973 TO JUNE 28, 2007

>>> GRAPHIC IMAGES AVAILABLE <<<

FILE AGRICOLA

FILE COVERS 1970 TO 10 Oct 2007 (20071010/ED)

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FILE COVERS 1973 TO 5 Oct 2007 (20071005/ED)

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FILE LAST LOADED: 11 NOV 94 <941111/UP>

FILE CROPR
FILE LAST RELOADED: 17 FEB 2004 <20040217/UP>

FILE CROPU

INVENTOR SEARCH

=> d ibib abs ind l8 1-2

L8 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:29325 HCAPLUS Full-text
DOCUMENT NUMBER: 142:133583
TITLE: Flavonoid solubilization agents and method of solubilizing flavonoid
INVENTOR(S): **Tsuzaki, Shinichi; Wanezaki, Satoshi ; Araki, Hideo**
PATENT ASSIGNEE(S): Fuji Oil Company, Limited, Japan
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005003112	A1	20050113	WO 2004-JP8864	20040624
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004253788	A1	20050113	AU 2004-253788	20040624
CN 1816537	A	20060809	CN 2004-80018725	20040624
US 2006153936	A1	20060713	US 2005-559730	20051207
PRIORITY APPLN. INFO.:			JP 2003-270377 A	20030702
			WO 2004-JP8864 W	20040624

AB The flavonoid solubilization agents contain soybean saponin and malonylisoflavon for efficient solubilization of solubility-low flavonoids such as isoflavon, baicalin, rutin, and naringin. Solubilization of baicalin with the flavonoid solubilization agents (malonylglycoside-rich soybean isoflavone and soybean saponin) was shown.

IC ICM C07D311-26
ICS C07D311-62; C07H017-07; C07H015-256; A23L001-30; C11D003-20; C11D003-22
CC 17-14 (Food and Feed Chemistry)
ST flavonoid solubilization agent soybean saponin malonylisoflavon
IT Cosmetics
Dentifrices
Deodorants
Detergents
Drugs
Food solubility
Health food
Odor and Odorous substances
Solubility
Solubilization
Solubilizers

(flavonoid solubilization agents and method for solubilizing flavonoids)

IT Flavonoids
RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(flavonoid solubilization agents and method for solubilizing flavonoids)

IT Flavones
RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(isoflavone glycosides, malonyl-; flavonoid solubilization agents and method for solubilizing flavonoids)

IT Glycosides
RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(isoflavone, malonyl-; flavonoid solubilization agents and method for solubilizing flavonoids)

IT Saponins
RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(soya, Soyhealth SA; flavonoid solubilization agents and method for solubilizing flavonoids)

IT Saponins
RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(soybean; flavonoid solubilization agents and method for solubilizing flavonoids)

IT 153-18-4, Rutin 520-26-3, Hesperidin 574-12-9, Isoflavone 10236-47-2, Naringin 21967-41-9, Baicalin 124590-31-4 730962-48-8, Soyaflavone HG
RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(flavonoid solubilization agents and method for solubilizing flavonoids)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:737591 HCAPLUS Full-text
DOCUMENT NUMBER: 139:213352
TITLE: Production of highly purified soybean saponin for health food
INVENTOR(S): **Wanezaki, Satoshi; Tsuzaki, Shinichi ; Araki, Hideo**
PATENT ASSIGNEE(S): Fuji Oil Company, Limited, Japan
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003075939	A1	20030918	WO 2003-JP2881	20030311

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,

UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003211607	A1	20030922	AU 2003-211607	20030311
CN 1649609	A	20050803	CN 2003-810095	20030311
US 2005123662	A1	20050609	US 2004-507637	20040914
PRIORITY APPLN. INFO.:			JP 2002-70048 A	20020314
			WO 2003-JP2881 W	20030311

AB Saponin is efficiently separated from isoflavones by performing multistage extraction under mild conditions such that malonyl isoflavone glycoside, from among isoflavones contained in the starting soybeans, is not converted into isoflavone glycoside, acetyl isoflavone glycoside or isoflavone aglycon. Thus, highly pure saponin can be obtained at a high yield on an industrial scale. The health food is useful as antioxidant, enhancer of immunity, for controlling obesity, etc.

IC ICM A61K035-78
ICS A61K031-704; A61P003-04; A61P037-04; A61P039-06

CC 17-6 (Food and Feed Chemistry)
Section cross-reference(s): 63

ST saponin prodn soybean health food drug

IT Glycosides
RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(malonyl isoflavone; production of highly purified soybean saponin containing)

IT Glycine max
Health food
(production of highly purified soybean saponin for health food)

IT Saponins
RL: BPN (Biosynthetic preparation); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(production of highly purified soybean saponin for health food)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RESULTS FROM REGISTRY AND CAPLUS

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=> d que stat l21
L1             5 SEA FILE=REGISTRY ABB=ON  FLAVONOIDS?
L4             1 SEA FILE=REGISTRY ABB=ON  (FLAVONES OR FLAVONOLS OR FLAVANONES
                 OR FLAVANONOLS OR ISOFLAVONES OR ANTHOCYANINS OR FLAVANOLS OR
                 CHALCONES OR AURONES)/CN
L10        32689 SEA FILE=HCAPLUS ABB=ON  L1 OR ?FLAVONOIDS?
L11          278 SEA FILE=HCAPLUS ABB=ON  L10 AND ?SOLUBIL?
L13           58 SEA FILE=HCAPLUS ABB=ON  L11 AND (L4 OR ?FLAVANON? OR ?ANTHOCYA
                 NIN? OR ?CHALCON? OR ?AURON?)
L14            1 SEA FILE=REGISTRY ABB=ON  WATER/CN
L15           20 SEA FILE=HCAPLUS ABB=ON  L13 AND (L14 OR H2O OR ?WATER?)
L16           58 SEA FILE=HCAPLUS ABB=ON  L13 OR L15
L17           32 SEA FILE=HCAPLUS ABB=ON  L16 AND (?FOOD? OR ?DRINK? OR
                 ?BEVERAG? OR ?MEDICIN? OR ?QUASI?(W)?DRUG? OR ?QUASIDRUG? OR
                 ?COSMET? OR ?ORAL?(W)?PREP? OR ?DENT? OR ?TOOTH? OR ?TEETH? OR
                 ?MOUTH? OR ?AROMATIC? OR ?DEODOR? OR ?DETERG?)
L19            8 SEA FILE=HCAPLUS ABB=ON  L17 AND (?PHYSIOL? OR ?METHOD?)
L20           32 SEA FILE=HCAPLUS ABB=ON  L17 OR L19
L21           24 SEA FILE=HCAPLUS ABB=ON  L20 AND (PRD<20040624 OR PD<20040624)


=> d ibib abs l21 1-24

L21  ANSWER 1 OF 24  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        2005:182077  HCAPLUS  Full-text
DOCUMENT NUMBER:         142:284789
TITLE:                   Antiaging cosmetics containing antioxidants
                         and free-radical neutralizing agents and
                         antiinflammatories and collagen/fibrin boosting agents
INVENTOR(S):             Gupta, Shyam K.
PATENT ASSIGNEE(S):      Bioderm Research, USA
SOURCE:                  U.S. Pat. Appl. Publ., 9 pp.
                         CODEN: USXXCO
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ----------------    ----   --------    --------------------   --------
     US 2005048008        A1    20050303    US 2003-604999         20030829 <--
PRIORITY APPLN. INFO.:                      US 2003-604999         20030829 <--
AB   The present invention provides a comprehensive solution to the problems
     associated with natural topical aging via the incorporation of an extra-
     cellular antioxidant or free-radical neutralizing composition, with intra-
     cellular antioxidant or free-radical neutralizing composition, and anti-
     inflammatory composition, and collagen or fibrin boosting composition  It is
     preferred to also have the above incorporated in a suitable carrier base or
     topical delivery system for skin, nail, and hair beneficial applications.  For
     example, a shampoo composition contained sodium lauryl ether sulfate 35.0,
     water 55.4, cinnamidopropyl trimonium N-acetyl cysteinate 5.0, preservatives
     0.5, Laureth-3 2.5, Rosmarinic acid 0.1, Darutoside 1.0, Niacinamide ascorbate
     0.5%.


L21  ANSWER 2 OF 24  HCAPLUS  COPYRIGHT 2007 ACS on STN
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ACCESSION NUMBER: 2005:182076 HCAPLUS Full-text
DOCUMENT NUMBER: 142:266364
TITLE: Plaque reducing compositions containing extracts from Glycyrrhiza and Usnea
INVENTOR(S): Ruggles, N. Garison
PATENT ASSIGNEE(S): Inobys Ltd., USA
SOURCE: U.S. Pat. Appl. Publ., 6 pp., Cont. of U.S. Ser. No. 53,501, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2005048007	A1	20050303	US 2004-962070		20041007 <--
PRIORITY APPLN. INFO.:			US 2000-245695P	P	20001102 <--
			US 2001-53501	B1	20011102 <--

AB Anti-odor and anti-plaque compns. for oral use are provided comprising an anti-odor and anti-plaque active component of an extract of Glycyrrhiza glabra or Usnea spp., an anti-odor or anti-plaque active component of such exts., and mixts. thereof. The composition may further comprise a cationic and/or non-ionic surfactant, divalent metal cations, oligosaccharides, suitable **solubilizing** carriers and other additives. For example, an oral swab contained glycerin 63, flavorant 31, Glycyrrhiza extract 2, sodium selenite 2, usnic acid 2%.

L21 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:14387 HCAPLUS Full-text
DOCUMENT NUMBER: 142:94063
TITLE: Preparation of rutin esters of **flavonoids** with ω-substituted C6-C22 fatty acids and used in **cosmetics** as skin protectors against damages due to UV-radiation
INVENTOR(S): Moussou, Philippe; Falcimaigne, Aude; Ghoul, Mohamed; Danous, Louis; Pauly, Gilles
PATENT ASSIGNEE(S): Cognis France S.A., Fr.
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005000831	A1	20050106	WO 2004-EP6281	20040611 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1636204	A1	20060322	EP 2004-739782		20040611 <--
R: DE, ES, FR, GB, IT					
JP 2007516937	T	20070628	JP 2006-515885		20040611 <--
US 2007184098	A1	20070809	US 2006-561551		20061221 <--
PRIORITY APPLN. INFO.:			EP 2003-13899	A	20030620 <--
			WO 2004-EP6281	W	20040611 <--

OTHER SOURCE(S): MARPAT 142:94063

AB The invention refers to esters of **flavonoids** such as flavones, flavonols, **flavanones**, flavanols, flavanolols, isoflavones, **anthocyanins**, proanthocyanidins, **chalcones**, **aurones** and hydroxycoumarins conjugated by an ester bond to an ω substituted C6-C22 fatty acid. These flavonoid derivs. exhibit excellent skin protecting properties especially against damages due to UV-radiation. They show very good chemical stability and are easily incorporated into **cosmetic** and pharmaceutical formulations.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:841373 HCAPLUS Full-text

DOCUMENT NUMBER: 142:388085

TITLE: Effects of **flavonoids** on superoxide dismutase: a structure-activity study

AUTHOR(S): Kuppusamy, Umah Rani; Muniandy, Parmeswary

CORPORATE SOURCE: Department of Molecular Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malay.

SOURCE: Malaysian Journal of Biochemistry and Molecular Biology (**2004**), 10, 15-21
CODEN: MJBBF6

PUBLISHER: Malaysian Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Thirty-two structurally related **flavonoids** were tested for their effects on superoxide dismutase (SOD) from human erythrocyte. Most of the **flavonoids** showed a dose-**dependent** inhibitory effect on this enzyme. Only eight compds. namely flavone, 3-hydroxyflavone, 5-hydroxyflavone, 7-hydroxyflavone, **chalcone**, 2- **hydroxychalcone**, 2-**hydroxyflavanone** and 4- **hydroxyflavanone** were stimulatory. Isoquercitrin was the most potent inhibitor with an IC25 value of 8 μM while 5-hydroxyflavone was the strongest stimulator (IC25 = -4 μM, where neg. IC25 indicates stimulation). Hydroxylation at positions C5, C7, C3' and C4' together with the presence of a double bond between C2 and C3 were necessary for the inhibitory potency. The enzyme kinetics showed competitive mode of inhibition for the two **flavonoids** tested, namely morin and catechin. SOD stimulation favored flavones without or with one hydroxyl group and **flavanones** with a single hydroxyl group. **Chalcone** and 2-**hydroxychalcone**, which have an open C-ring and a C2-C3 double bond also exhibited stimulatory effects. On the contrary, phloridzin, which is also a **chalcone** but lacks the double bond, exhibited strong inhibitory potency. In this study, a rapid and easy microplate assay was employed. The **method** has been improved to increase the **solubility** of the formazan by using DMSO at 10% final concentration

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:263862 HCAPLUS Full-text

DOCUMENT NUMBER: 139:6032

TITLE: Influence of Industrial Processing on Orange Juice **Flavanone Solubility** and Transformation to **Chalcones** under Gastrointestinal Conditions

AUTHOR(S): Gil-Izquierdo, Angel; Gil, Maria Isabel; Tomas-Barberan, Francisco Abraham; Ferreres, Federico
CORPORATE SOURCE: Research Group on Quality, Safety and Bioactivity of Plant Foods, Departamento Ciencia y Tecnologia de Alimentos, CEBAS-CSIC, Murcia, 30080, Spain
SOURCE: Journal of Agricultural and Food Chemistry (**2003**), 51(10), 3024-3028
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Orange juice manufactured on an industrial scale was subjected to digestion under in vitro gastrointestinal conditions (pH, temperature, and enzyme and chemical conditions) to evaluate the influence of individual industrial processing treatments on **flavanone solubility**, stability, and ability to permeate through a membrane under simulated **physiol** . conditions. Four industrial processes including squeezing, standard pasteurization, concentration, and freezing were evaluated. Hand squeezing was compared with industrial squeezing. After in vitro gastrointestinal digestion of the orange juices, the **flavanones** able to permeate through a dialysis membrane, and those remaining in the retentate were evaluated by HPLC as were those present in the insol. fraction. In all of the assayed orange juices, a high content of precipitated **chalcones** (≈70% of the total **flavanones**) was formed under the **physiol**. conditions of the gastrointestinal tract. Hand squeezing provided a higher concentration of **flavanones** in the permeated fraction and lower transformation to **chalcones** than industrial squeezing. Standard pasteurization did not influence the **solubility** and permeability of the orange juice **flavanones** and **chalcones**. Industrial concentration did not affect the amount of **flavanones** able to permeate but decreased the **chalcones** produced. Juices produced from frozen orange juice contained considerably smaller amts. of both soluble **flavanones** and insol. **chalcones**.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:316730 HCAPLUS Full-text
DOCUMENT NUMBER: 137:60125
TITLE: Effects of compounds found in propolis on Streptococcus mutans growth and on glucosyltransferase activity
AUTHOR(S): Koo, Hyun; Rosalen, Pedro L.; Cury, Jaime A.; Park, Yong K.; Bowen, William H.
CORPORATE SOURCE: Center for Oral Biology and Eastman Department of Dentistry, University of Rochester Medical Center, Rochester, NY, 14642, USA
SOURCE: Antimicrobial Agents and Chemotherapy (**2002**), 46(5), 1302-1309
CODEN: AMACCQ; ISSN: 0066-4804
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Propolis, a resinous bee product, has been shown to inhibit the growth of oral microorganisms and the activity of bacterium-derived glucosyltransferases (GTFs). Several compds., mainly polyphenolics, have been **identified** in this natural product. The present study evaluated the effects of distinct chemical groups found in propolis on the activity of GTF enzymes in solution and on the surface of saliva-coated hydroxyapatite (sHA) beads. Thirty compds., including **flavonoids** , cinnamic acid derivs., and terpenoids, were tested for the ability to inhibit GTFs B, C, and D from Streptococcus mutans and GTF from S. sanguinis (GTF Ss). Flavones and flavonols were potent inhibitors of GTF

activity in solution; lesser effects were noted on **insolubilized** enzymes. Apigenin, a 4',5,7-trihydroxyflavone, was the most effective inhibitor of GTFs, both in solution (90.5 to 95% inhibition at a concentration of 135 μg/mL) and on the surface of sHA beads (30 to 60% at 135 μg/mL). Antibacterial activity was determined by using MICs, min. bactericidal concns. (MBCs), and time-kill studies. **Flavanones** and some dihydroflavonols, as well as the sesquiterpene tt-farnesol, inhibited the growth of S. mutans and S. sobrinus; tt-farnesol was the most effective antibacterial compound (MICs of 14 to 28 μg/mL and MBCs of 56 to 112 μg/mL). Tt-Farnesol (56 to 112 μg/mL) produced a 3-log-fold reduction in the bacterial population after 4 h of incubation. Cinnamic acid derivs. had negligible biol. activities. Several of the compds. **identified** in propolis inhibit GTF activities and bacterial growth. Apigenin is a novel and potent inhibitor of GTF activity, and tt-farnesol was found to be an effective antibacterial agent.

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:31308 HCAPLUS Full-text
DOCUMENT NUMBER: 134:91147
TITLE: A **method** for the improvement of transport across adaptable semi-permeable barriers
INVENTOR(S): Cevc, Gregor
PATENT ASSIGNEE(S): Idea Innovative Dermale Applikationen G.m.b.H., Germany
SOURCE: PCT Int. Appl., 94 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001001962	A1	20010111	WO 1999-EP4659	19990705 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9954096	A	20010122	AU 1999-54096	19990705 <--
CA 2375157	A1	20010111	CA 2000-2375157	20000705 <--
WO 2001001963	A1	20010111	WO 2000-EP6367	20000705 <--
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1189598	A1	20020327	EP 2000-947939	20000705 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
HU 2002001454	A2	20021228	HU 2002-1454	20000705 <--
JP 2003503442	T	20030128	JP 2001-507458	20000705 <--

EE 200200008	A	20030415	EE 2002-8		20000705 <--
AU 779765	B2	20050210	AU 2000-61557		20000705 <--
RU 2260445	C2	20050920	RU 2002-101651		20000705 <--
HR 2001000881	A1	20030831	HR 2001-881		20011127 <--
IN 2001DN01133	A	20050311	IN 2001-DN1133		20011206 <--
NO 2002000032	A	20020305	NO 2002-32		20020104 <--
US 2003099694	A1	20030529	US 2002-37480		20020104 <--
MX 2002PA00053	A	20030721	MX 2002-PA53		20020107 <--
US 2005123897	A1	20050609	US 2004-984450		20041108 <--
IN 2005DN03651	A	20070824	IN 2005-DN3651		20050818 <--
PRIORITY APPLN. INFO.:			WO 1999-EP4659	A	19990705 <--
			WO 2000-EP6367	W	20000705 <--
			IN 2001-DN1133	A3	20011206 <--
			US 2002-37480	A1	20020104 <--

AB The invention relates to a **method**, a kit and a device for controlling the flux of penetrants across an adaptable semi-permeable porous barrier, the **method** comprising the steps of: preparing a formulation by suspending or dispersing said penetrants in a polar liquid in the form of fluid droplets surrounded by a membrane-like coating of one or several layers, said coating comprising at least two kinds of forms of amphiphilic substances with a tendency to aggregate; said penetrants being able to transport agents through the pores of said barrier or to enable agent permeation through the pores of said barrier after penetrants have entered the pores, selecting a dose amount of said penetrants to be applied on a predetd. area of said barrier to control the flux of said penetrants across said barrier, and applying the selected dose amount of said formulation containing said penetrants onto said area of said porous barrier. Highly adaptable complex droplets (ultradeformable vesicles or Transfersomes) were prepared containing soybean phosphatidylcholine, Na cholate, 3H-labeled DPPC and phosphate buffer.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:88392 HCAPLUS Full-text
DOCUMENT NUMBER: 132:138777
TITLE: Dissolution of carthamin using **flavonoids**
INVENTOR(S): Okada, Shigetaka; Yonetani, Satoshi; Nishimura, TakaHisa; Nakae, Takashi; Takii, Hiroshi
PATENT ASSIGNEE(S): Ezaki Glico Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000038520	A	20000208	JP 1998-223574	19980722 <--
PRIORITY APPLN. INFO.:			JP 1998-223574	19980722 <--

AB Carthamin can be dissolved in **water** in the presence of **flavonoids**.

L21 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:764378 HCAPLUS Full-text
DOCUMENT NUMBER: 131:355899
TITLE: Flavonoid compounds and their use, especially in **cosmetics**
INVENTOR(S): Bresson-Rival, Delphine; Mariotte, Anne-Marie; Boumendjel, Ahcene; Perrier, Eric

PATENT ASSIGNEE(S): Coletica S. A., Fr.
SOURCE: Ger. Offen., 22 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19922287	A1	19991125	DE 1999-19922287	19990514 <--
DE 19922287	B4	20060914		
FR 2778663	A1	19991119	FR 1998-6194	19980515 <--
FR 2778663	B1	20010518		
US 6235294	B1	20010522	US 1998-113158	19980710 <--
JP 2000026263	A	20000125	JP 1999-136331	19990517 <--
JP 3558922	B2	20040825		
US 2001031735	A1	20011018	US 2001-828986	20010410 <--
US 6471973	B2	20021029		

PRIORITY APPLN. INFO.: FR 1998-6194 A 19980515 <--
US 1998-113158 A3 19980710 <--
OTHER SOURCE(S): MARPAT 131:355899

AB 4-Keto **flavonoids** (phenylchromones) are stabilized for use in **cosmetic**, pharmaceutical, and dietetic compns. by esterification on a free OH group with a C3-30 monocarboxylic acid without loss of their biol. properties. These esters have enhanced lipid **solubility** and affinity for cell membranes and the epidermis. Thus, hesperetin 16.55 reacted with lauroyl chloride 26.5 mmol in refluxing PhMe to form dilauroylhesperetin in 64% yield. The diester showed greater radical-scavenging activity than native hesperetin.

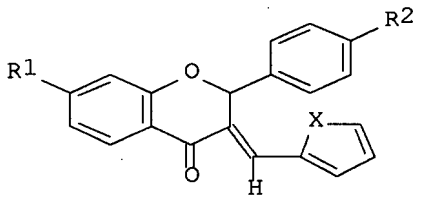
L21 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:409182 HCAPLUS Full-text
DOCUMENT NUMBER: 129:157870
TITLE: Antimutagenicity of flavones and flavonols to heterocyclic amines by specific and strong inhibition of the cytochrome P450 1A family
AUTHOR(S): Kanazawa, Kazuki; Yamashita, Takatoshi; Ashida, Hitoshi; Danno, Gen-Ichi
CORPORATE SOURCE: Department of Biofunctional Chemistry, Faculty of Agriculture, Kobe University, Kobe, 657-8501, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (**1998**), 62(5), 970-977
CODEN: BBBIEJ; ISSN: 0916-8451
PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We found the mechanism in **flavonoids** that can strongly suppress the mutagenicity of one of the **food**-derived and carcinogenic heterocyclic amines, 3-amino-1-methyl-5H-pyrido[4,3-b]indole (Trp-P-2). The antimutagenicity was evaluated by IC50 value, the amount required for 50% inhibition of the mutagenicity of 0.1 nmol Trp-P-2, with Salmonella typhimurium TA98 strain in the presence of S9 mix. The flavones and flavonols were two orders stronger as antimutagens than such antimutagenic phytochems. as chlorophylls and catechins. We had previously found **flavonoids** to be a desmutagen to neutralize Trp-P-2 before or during attack of DNA, because they had no effect on either the ultimate mutagenic form of Trp-P-2 (N-hydroxy-Trp-P-2) or the mutated cells. The desmutagenicity of the **flavonoids** did not depend on the hydroxy number or position that should be associated with antioxidative

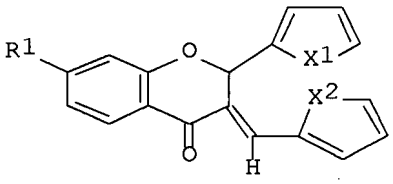
potency, and was also unaffected by the **solubility** of Trp-P-2 in the assay solution The inhibitory effect of the **flavonoids** on the metabolic activation of Trp-P-2 to N-hydroxy-Trp-P-2 was almost in parallel with the antimutagenic IC50 value, when determined with a Saccharomyces cerevisiae AH22 cell simultaneously expressing both rat cytochrome P 450 1A1 and yeast reductase. The Ki values of flavones and flavonols for the enzyme were less than 1 μM, while the Km value of Trp-P-2 was 25 μM. The antimutagenicity of the flavones and flavonols was thus concluded to be due to inhibition of the activation process of Trp-P-2 by P 450 1A1 to the ultimate carcinogenic form. They were also able to act as antimutagens toward other indirect mutagens that were activated by P 450 1A1.

REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

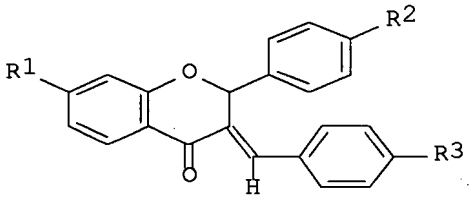
L21 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:637420 HCAPLUS Full-text
DOCUMENT NUMBER: 126:7857
TITLE: Alkali-catalyzed condensation of **flavanones** and **aromatic** aldehydes: synthesis of (E)-3-**arylideneflavanones** and related compounds
AUTHOR(S): Dhara, Mrinal G.; Mallik, Uttam K.; Mallik, Asok K.
CORPORATE SOURCE: Dep. Chem., Jadavpur Univ., Calcutta, 700 032, India
SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (**1996**), 35B(11), 1214-1217
CODEN: IJSBDB; ISSN: 0376-4699
PUBLISHER: Publications & Information Directorate, CSIR
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 126:7857
GI



I



II



III

AB The poor **solubility** of (E)-3-**arylideneflavanones** and their heterocyclic analogs in aqueous alcs. has been utilized for alkali-catalyzed synthesis of a number of such compds., e.g. I (R1 = H, R2 = NMe2, OMe, H, Cl, X = O; R1 = OMe, R2 = NMe2, X = O; R1 = H, R2 = NMe2, OMe, X = S), II (R1 = H, OMe, X1 = X2 = O; R1 = H, X1 = S, X2 = O, S) and III (R1 - R3 = H; R1 = H, R2 = R3 = OMe; R1 = H, OMe, R2 = R3 = Cl; R1 = H, R2 = OMe, H, R3 = Cl), starting from either o-**hydroxychalcones** or o-hydroxyacetophenones. Among several other

factors responsible for this success, the reactivity of the condensing aldehyde appears most important. Thus, a mixture of furfural and 2-hydroxyacetophenone were treated with KOH in aqueous MeOH to give 64% II (R1 = H, X1 = X2 = O).

L21 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:172110 HCAPLUS Full-text
DOCUMENT NUMBER: 124:196469
TITLE: Nontoxic, noncorrosive microbicidal composition.
INVENTOR(S): Luss, V. Gerold
PATENT ASSIGNEE(S): H. B. Fuller Co., USA
SOURCE: Can. Pat. Appl., 14 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
CA 2144021	A1	19951111	CA 1995-2144021		19950306 <--
AU 9516317	A	19951116	AU 1995-16317		19950405 <--
PRIORITY APPLN. INFO.:			US 1994-241177	A	19940510 <--

AB The invention provides environmentally-acceptable sanitizing and microbicidal compns. that are safe to humans and/or animals, which may be used to sanitize surfaces and equipment used to prepare, process or manufacture **food**, pharmaceuticals or other prepns. These compns. reduce or eliminate residual microbial contamination which may reside on an equipment surface or in ancillary equipment such as valves, pipes, filters, and the like. The concentrated compns. comprise a **water**-soluble C1-4 short-chain organic acid component, which provides an acid pH value (1.5-4.0) upon dilution with an excess of **water**, an C6-16 intermediate-chain length fatty acid component, and antioxidant phenolic component, a **solubilizer** chosen from hydrotropes and surfactants, and optional components which may be added to control or enhance foam, and aid in control of **water** hardness, viscosity and stability.

L21 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:697191 HCAPLUS Full-text
DOCUMENT NUMBER: 121:297191
TITLE: Characterization of flavonoid 3',5'-hydroxylase in microsomal membrane fraction of Petunia hybrida flowers
AUTHOR(S): Menting, John G. T.; Scopes, Robert K.; Stevenson, Trevor W.
CORPORATE SOURCE: Centre for Protein and Enzyme Technology, La Trobe University, Bundoora, 3083, Australia
SOURCE: Plant Physiology (**1994**), 106(2), 633-42
CODEN: PLPHAY; ISSN: 0032-0889
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A flavonoid 3',5'-hydroxylase (F3',5'H) was detected in the microsomal fraction of Petunia hybrida flowers. Activity varied with the development of flowers, peaking immediately prior to and during anthesis, but was absent in mature flowers. F3',5'H activity in flower exts. from genetically defined floral color mutants correlated strictly with the genotypes Hf1 and Hf2. No activity was detected in flowers from mutants homozygous recessive for both alleles. F3',5'H activity was **dependent** on NADPH and mol. oxygen; there was only slight activity with NADH. The enzyme catalyzes the hydroxylation of

5,7,4'- trihydroxyflavonone at the 3' and 5' positions, and of 5,7,3',4'-tetrahydroxyflavonone and dihydroquercetin at the 5' position. Hydroxylase activity was inhibited by plant growth regulators (1-aminobenzotriazole and tetcyclacis) and by CO, N-ethylmaleimide, diethyldithiocarbamate, and cytochrome (Cyt) c. Activity was not affected by diethylpyrocarbonate or phenylmethylsulfonyl fluoride, but was enhanced by 2-mercaptoethanol. A polyclonal antibody that inhibits higher plant NADPH-Cyt P 450 reductase inhibited the F3',5'H. The data are consistent with the suggestion that the P. hybrida F3',5'H is a monooxygenase consisting of a Cyt P 450 and a NADPH-Cyt P 450 reductase. Cyts P 450 were detected in microsomal membranes and in **solubilized detergent** exts. of these membranes. F3',5'H activity was sensitive to low concns. of all **detergents** tested, and therefore **solubilization** of the active enzyme was not achieved. Reaction products other than **flavanones** were observed in F3',5'H assays and these may be formed by enzymic oxidation of **flavanones**. The possibility of a microsomal flavone synthase of a type that has not been described in P. hybrida is discussed.

L21 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:6950 HCAPLUS Full-text
DOCUMENT NUMBER: 120:6950
TITLE: Tannins and the qualities of wines
AUTHOR(S): Singleton, Vernon L.
CORPORATE SOURCE: Dep. Vitic. Enol., Univ. California, Davis, CA, 95616-8749, USA
SOURCE: Basic Life Sciences (**1992**), 59(Plant Polyphenols), 859-80
CODEN: BLFSBY; ISSN: 0090-5542
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 64 refs. The phenols of grapes and wines are very important as constituents and reactants in these products, as a source of phenols in the human diet, and also as a model for the role of phenolics in other **foods** and **beverages**. The scientific and tech. literature on wine phenols is extensive and deserves to be better known. Most of the phenols of wine originate in the grape, but some are modified considerably during processing. Individual grape varieties differ considerably, but as a gross estimate of the approx. 4,000 mg/kg of phenols in fresh grapes, about 5 percent is in the juice with about one-third of the remainder in berry skins and two-thirds in the seeds. The juice contains predominantly hydroxycinnamates, notably caftaric acid. The skins contain the **anthocyanins** from red grapes and other **flavonoids** including catechins and condensed tannins, whereas, the seeds contain predominantly the latter group. These compds. are transferred and modified during winemaking and have marked effects on sensory qualities. Some recent findings regarding oxidns. and polymns. of grape and wine phenols are detailed emphasizing in research in the authors' laboratory A particularly exciting finding is that **anthocyanins solubilize** and retain tannins in wines.

L21 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:170327 HCAPLUS Full-text
DOCUMENT NUMBER: 116:170327
TITLE: Blue and ultraviolet-B light photoreceptors in parsley cells
AUTHOR(S): Ensminger, Peter A.; Schaefer, Eberhard
CORPORATE SOURCE: Inst. Biol. II, Albert-Ludwigs-Univ., Freiburg/Br., S-7800, Germany
SOURCE: Photochemistry and Photobiology (**1992**), 55(3), 437-47
CODEN: PHCBAP; ISSN: 0031-8655

DOCUMENT TYPE: Journal
LANGUAGE: English

AB UV-B (UV-B) and blue light photoreceptors have been shown to regulate **chalcone** synthase and flavonoid synthesis in parsley cell cultures. These photoreceptors have not yet been **identified**. UV-B photoreception was studied with **physiol**. expts. involving temperature shifts and the possible role of flavin in blue and UV-B light photoreception was examined Cells irradiated with UV-B light (0.5-15 min) at 2° have the same fluence requirement for **chalcone** synthase and flavonoid induction as controls irradiated at 25°. This is indicative of a purely photochem. reaction. Cells fed with riboflavin and irradiated with 6 h of UV-containing white light synthesize higher levels of **chalcone** synthase and flavonoid than unfed controls. This effect did not occur with blue light. These results indicate that flavin-sensitization requires excitation of flavin and the UV-B light photoreceptor. The in vivo kinetics of flavin uptake and bleaching indicate that the added flavin may act at the surface of the plasma membrane. In view of the likely role of membrane-associated flavin in photoreception, in vitro flavin binding to microsomal membranes was measured. At least one microsomal flavin binding site was **solubilized** by resuspension of a microsomal pellet in buffer with high KPi and NaCl concns. and centrifugation at 38,000 g. The 38,000 g insol. fraction had much greater flavin binding and contained a receptor with an apparent KD of about 3.6 μM and an estimated in vivo concentration of at least 6.7 + 10-8 M. FMN, roseoflavin, and FAD can compete with riboflavin for this binding site(s), although each has lower affinity than riboflavin. Most microsomal protein was **solubilized** by resuspension of the microsomal pellet in non-denaturing **detergents** and centrifugation at 38,000 g; however, this inhibited flavin binding, presumably because of disruption of the environment of the flavin receptor. The parsley microsomal flavin binding receptor(s) have a possible role in **physiol**. photoreception.

L21 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1991:135583 HCAPLUS Full-text
DOCUMENT NUMBER: 114:135583
TITLE: Effect of myricetin and other **flavonoids** on the liver plasma membrane calcium pump. Kinetics and structure-function relationships
AUTHOR(S): Thiyagarajah, P.; Kuttan, S. C.; Lim, S. C.; Teo, T. S.; Das, N. P.
CORPORATE SOURCE: Dep. Biochem., Natl. Univ. Singapore, Singapore, 0511, Singapore
SOURCE: Biochemical Pharmacology (**1991**), 41(5), 669-75
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Thirty-three different **flavonoids** were screened for their ability to influence ATP-**dependent** Ca2+ uptake by rat liver plasma membrane vesicles. Nine **flavonoids**, at a concentration of 100 μM, inhibited Ca2+ uptake by >20%. The remaining 24 **flavonoids** exhibited little or no effect. The relative order of potency of the active **flavonoids** was myricetin > butein > phloretin = luteolin > eriodictyol = silybin. Myricitrin and phloridzin, the glycosides of myricetin and phloretin, resp., had no effect. The degree of inhibition caused by myricetin was concentration-**dependent** and was affected by the preincubation time. After 10 min of preincubation, 52 μM myricetin lowered the initial rate of 45Ca uptake by 50%. The inhibition by myricetin was non-competitive with respect to Mg-ATP and of a mixed type with respect to Ca2+. At 100 μM, myricetin had no effect on several plasma membrane enzymes such as 5'-nucleotidase, alkaline phosphatase, and a Ca2+-activated ATPase, but

inhibited K+-**dependent** p-nitrophenyl phosphatase by 83%. The ATP-**dependent** Ca2+ transport systems located on the plasma membrane or endoplasmic reticulum derived from other tissues were also inhibited by myricetin. Anal. of the structure-activity relationship revealed that lipid **solubility** and polyhydroxylation particularly at positions 5,7,3', and 4' of the flavonoid ring enhanced the ability of the flavonoid to inhibit Ca2+ uptake. The inhibition of Ca2+ transport activity probably involves interactions of phenolic groups of the flavonoid with the Ca2+ transporting protein.

L21 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1990:630000 HCAPLUS Full-text
DOCUMENT NUMBER: 113:230000
TITLE: Stable preparations containing hydrophobic **flavonoids** of licorice and triglyceides
INVENTOR(S): Takagaki, Ryoji
PATENT ASSIGNEE(S): Maruzen Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02204417	A	19900814	JP 1989-22565	19890202 <--
JP 2794433	B2	19980903		
PRIORITY APPLN. INFO.:			JP 1989-22565	19890202 <--

AB The title prepns. contain hydrophobic **flavonoids** of licorice and triglycerides of middle-chain fatty acids. The triglycerides dissolve the **flavonoids** better than conventional solvents, and the resulting solns. are phys. and chemical stable. The prepns. are useful for **foods**, **cosmetics**, and pharmaceuticals. **Licochalcone** A (5 weight parts) was dissolved in 95 weight parts ODO-L (middle-chain fatty acid triglycerides) and left for 24 h to show good **solubility**

L21 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1987:616223 HCAPLUS Full-text
DOCUMENT NUMBER: 107:216223
TITLE: **Dihydrochalcone** sweeteners from citrus **flavanones**
AUTHOR(S): Horowitz, Robert M.; Gentili, Bruno
CORPORATE SOURCE: Fruit Veg. Chem. Lab., Agric. Res. Serv., Pasadena, CA, USA
SOURCE: Food Science and Technology (New York, NY, United States) (**1986**), 17(Altern. Sweeteners), 135-53
CODEN: FSTEEM; ISSN: 0891-8961
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 37 refs. on the origin and preparation of **dihydrochalcone** from the Cituns flavones naringin and neohesperidin, and on the use of **dihydrochalcones** as sweeteners. The properties, **solubility**, stability, caloric value, **food** uses, toxicol. and regulatory status of **dihydrochalcone** sweeteners are discussed.

L21 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1980:51751 HCAPLUS Full-text
DOCUMENT NUMBER: 92:51751
TITLE: Phloretin and related compounds inhibit agonist stimulated cAMP accumulation in cultured cells of CNS origin
AUTHOR(S): Ortmann, Rainer; Nutto, Doris; Waldmeyer, Juerg
CORPORATE SOURCE: Pharmakol. Inst., Univ. Freiburg, Freiburg/Br., D-78, Fed. Rep. Ger.
SOURCE: Biochemical Pharmacology (**1979**), 28(15), 2357-61
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The **dihydrochalcone** phloretin [60-82-2], related **flavonoids**, and diethylstilbestrol [56-53-1] inhibited agonist induced cyclic AMP [60-92-4] accumulation with different potencies in cultures of human astrocytoma cells 1321N1 and murine neuroblastoma cells N4TG3. The inhibition was irreversible by washing, Ca-**independent** , abolished by glycosidation of the inhibitor, was not agonist-specific, and increased with time during a preincubation period. Measurement of dipole moments and estimation of lipid **solubility** of the inhibitors indicated that lipophilicity was important for their inhibitory potency. Thus, these substances may inhibit cyclic AMP accumulation not by specific interaction with agonist receptor sites but by interacting with membrane lipids. The structure-activity relationship of different inhibitors resembled their inhibitory potency in the hexose transport system of red blood cells.

L21 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1971:527328 HCAPLUS Full-text
DOCUMENT NUMBER: 75:127328
ORIGINAL REFERENCE NO.: 75:20091a,20094a
TITLE: **Bioflavonoids** as a new growth factor for the cricket, Acheta domesticus
AUTHOR(S): Neville, P. F.; Luckey, T. D.
CORPORATE SOURCE: Sch. Med., Univ. Missouri, Columbia, MO, USA
SOURCE: Journal of Nutrition (**1971**), 101(9), 1217-23
CODEN: JONUAI; ISSN: 0022-3166
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The growth rate of the house cricket, Acheta domesticus was increased 2-3-fold when grass or other natural materials were added to a feed which contained all known nutrients for this insect. The growth factor from grass was organic in nature, heat stable, soluble in **water** and several organic polar solvents, and insol. in acid and nonpolar organic solvents. The active dried butanol solubles of grass were extracted with MeOH and petroleum ether. When the MeOH fraction was washed with a **H2O**-CHCl3 mixture more of the activity went into the **water** fraction. These characteristics make this growth factor similar to those reported for other insects. Thin-layer chromatog., **solubility**, staining, and fluorescent properties indicated the presence of bioflavonoid compds. Subsequently rutin, hesperidin, hesperidin **methylchalcone**, and esculin each produced a significant increase in the growth rate of crickets. The activity of rutin was greater than all other compds. tested. The results suggest the possible development of an acceptable assay for the biol. activity previously **identified** as vitamin P.

L21 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1967:79512 HCAPLUS Full-text
DOCUMENT NUMBER: 66:79512

ORIGINAL REFERENCE NO.: 66:14919a,14922a
TITLE: **Medicinal** plants from Cambodia, especially Garcinia and Vitex pubescens
AUTHOR(S): Douk, Phana
CORPORATE SOURCE: Pharm. Univ., Paris, Fr.
SOURCE: Travaux des Laboratoires de Matiere Medicale et de Pharmacie Galenique des Facultes de Pharmacie de Paris (**1966**), Volume Date 1965, 50, 266 pp.
CODEN: TLMPAJ; ISSN: 0371-9278
DOCUMENT TYPE: Journal
LANGUAGE: French

AB A total of 459 species, classed in botanical order, were reviewed with mention of Latin, French, and Cambodian names, popular **medicinal** uses, and chemical composition were known. Garcinia vilersiana, G. hanburyi, G. ferrea, Holarrhena curtisii, and Vitex pubescens were examined and original studies presented following a review of the literature. Flavonoides from the leaves and trunk bark of G. vilersiana were separated and studied. **Flavanones** were distinguished in the leaves by their colored reactions and uv spectra. The trunk bark held xanthones which were fractionated into 3 substances on a polyamide column. Xanthone A, most abundant and best defined was studied by uv and ir spectra and the preparation of acetylated and methylated derivs. After elemental analysis, a formula of C14H12O6 was proposed. The substance carries a methoxyl group. Alkaline fusion furnished phloroglucinol and p-hydroxybenzoic acid. In G. hanburyi, some flavonoides were distinguished in leaves and bark, but since the presence of resinous gum hindered their separation from the bark, only the leaves were studied. Two substances difficult to obtain in a pure state, differing in ether **solubility**, were separated These products do not give any sugar on acid hydrolysis, and therefore they do not seem to be heterosides. The products of alkaline fusion have been **identified** as phloroglucinol and protocatechic and p-hydroxybenzoic acids. These are substances of the eriodictyol and naringetol group. In G. ferrea, no **flavonoids** were distinguished. Catechic tannins were found: 6% in the leaves, 20% in the trunk bark. The study of alkaloids in H. curtisii revealed 0.18% in the leaves, 0.04% in the stems, and 0.22% in the roots. Conessine was demonstrated in the bark of the stem and of the root by paper and thin layer chromatography. The leaves contained alkaloids of different Rf values from conessine. Flavanoids, quercetol, and isoquercitroside were shown by paper chromatography. The leaves of V. pubescens showed traces of a cyanogenetic compound, and of **flavonoids** including C-flavonosides. No chromogenic heteroside was found, but of the catechic tannins, a **leucoanthocyanine** was discovered, separated, and studied further. Treated with hot alc. HCl, it gave rise to an anthocyanidol **identified** by its Rf in paper chromatography as pelargonidol or 3',5,7-trihydroxyflavylium. Alkaline fusion of the leucoanthrocyanine furnished some phloroglucinol and some p-hydroxybenzoic acid, i.e., it was leucopelargonidol. The results of the elemental analysis were in accord with the formula C15H13O6.1.5 **H2O**. 153 references.

L21 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1966:447572 HCAPLUS Full-text
DOCUMENT NUMBER: 65:47572
ORIGINAL REFERENCE NO.: 65:8864c-h,8865a-e
TITLE: **Flavonoids**. XIV. **Flavonoids** and **thiaflavonoids** with N-containing groups in the heteroring
AUTHOR(S): Bognar, Rezso; Rakosi, Miklos
CORPORATE SOURCE: Univ. Debrecen, Hung.
SOURCE: Justus Liebigs Annalen der Chemie (**1966**), 693, 225-32

CODEN: JLACBF; ISSN: 0075-4617
DOCUMENT TYPE: Journal
LANGUAGE: German

GI For diagram(s), see printed CA Issue.

AB cf. CA 64, 1994f. The preparation is described of N-containing derivs. (in the hetero ring) of **flavanone**, flavan, flavone, 1-thiaflavan, and 1-**thiaflavanone**. **Method** A. Pd-C (1.5 g.) in 500 cc. AcOH saturated with H, 14.25 g. 3-**isonitrosoflavanone** (Ia) (Shimizu and Nakazawa, CA 48, 3358d) in 500 cc. AcOH added, the mixture hydrogenated at room temperature (the calculated amount H was absorbed in .apprx.2 hrs.) and filtered, the filtrate evaporated in vacuo under N, and the residue recrystd. from 120 cc. 5% HCl gave (in 3 crops) 13.05 g. I.HCl, m. 204-5° (decomposition) (2.5% HCl). I.HCl (1 g.) refluxed 150 hrs. with 20 cc. 5% H2SO4 (the crude hydrolysis product was filtered daily and washed with **H2O**) and the combined ppts. stirred repeatedly with absolute Et2O, filtered, and recrystd. from 15 cc. MeOH containing some AcOH gave 0.22 g. II, m. 182-4°; the mother liquor on cooling deposited addnl.II together with some I.HCl. **Method** B. Rearrangement of the tosylate (III) of **flavanone** oxime (IV) with KOEt in C6H6 (O'Brien, et al., CA 58, 13900f) gave 64% I.HCl, m. 204-5° (decomposition), **identical** (mixed m.p. and uv spectrum) with I.HCl prepared above. IV treated with 4-MeC6H4SO2Cl in C5H5N gave 62% III, m. 148-9°. I.HCl (2.5 g. prepared by **method** A) or 1.7 g. I.HCl (prepared by **method** B) dissolved in 150 cc. 2.5% HCl by heating and the solution cooled and treated dropwise slowly with 1.5% aqueous NaOH until a weak alkaline reaction, gave 2.16 g. and 1.7 g. crude I, m. 104-6°; anal. I m. 106-8° (EtOH ligroine); both samples of I were **identical** (mixed m.p. and ir and uv spectra). I.HCl (1 g., prepared by **method** A) or 3.5 g. I.HCl (prepared by **method** B) suspended in 5 cc. absolute C5H5N treated with 5 cc. Ac2O with cooling and the mixture refrigerated 48 hrs. and added dropwise to 1:1 ice-10% HCl with stirring gave 0.98 g. and 3.39 g. crude Ac derivative (V) of I, resp.; recrystn. from EtOH gave V, m. 192-4°, and V, m. 196°, resp.; both samples of V were **identical** (mixed m.p.). Pd-C (1.25 g.) in 40 cc. AcOH saturated with H, 3.25 g. I.HCl (prepared by **method** A) or 2 g. I.HCl (prepared by **method** B) in 100 cc. AcOH added, the mixture hydrogenated at room temperature (1 molar equivalent H was rapidly absorbed) and filtered, the filtrate evaporated in vacuo, and the residue recrystd. from .apprx.30 cc. 2.5% HCl gave 2.47 g. (from the filtrate was isolated an addnl. 0.58 g.) VI.HCl m. 208° (decomposition) and 1.6 g. VI.HCl, m. 205° (decomposition), resp.; anal. VI.HCl m. 211-12° (decomposition) (2.5% HCl). I.HCl (2 g.) in 100 cc. MeOH treated portionwise with 2 g., NaBH4 at room temperature, after 48 hrs. the solution made weakly acid and evaporated in vacuo, the residue treated with 2.5% HCl (the greater portion dissolved), the solution filtered and let stand, and the precipitate (1.53 g.) repeatedly recrystd. from 2.5% HCl gave VI.HCl, m. 210-11°; the oily fraction remaining after recrystn. of crude VI.HCl dissolved in EtOH, the solution evaporated in vacuo, and the residue recrystd. from EtOH gave 50 mg. 3-aminoflavone (VII), m. 134-6°, **identical** (mixed m.p.) with VII prepared from Ia (see below). VI.HCl (1 g.) shaken 8 hrs. with 20 cc. 1.5% aqueous NaOH gave 0.77 g. VI, m. 124.5-5.5° (ligroine); picrate m. 218-20° (decomposition). 3-**Acetaminoflavanone** (VIII) (2.81 g.), 2.1 g. HONH2.HCl, and 2.4 g. anhydrous NaOAc in 30 cc. EtOH refluxed 5 hrs. and poured into ice-**H2O** with stirring, and after several hrs. the precipitate filtered, washed with ice-**H2O**, and repeatedly recrystd. from EtOH gave 0.8 g. VIII oxime, m. 214-15°, mixed m.p. (with VIII, m. 196-7°) depressed to 179-81.5°. Ia (3.08 g.) dissolved in 50 cc. AcOH by heating, the solution cooled, treated with 6 g. SnCl2.2H2O in 10 cc. concentrated HCl, and shaken 24 hrs. at room temperature, and the precipitated complex filtered, dried, and shaken several hrs. with 150 cc. 2% aqueous NaOH gave 2.92 g. VII, m. 138-9° (EtOH); HCl salt m. 194-6°; picrate m. 184-6°. VII (1 g.) in 40 cc. 10% H2SO4 refluxed 210 hrs. (the precipitate which separated was filtered daily and washed with **H2O**) gave 0.78 g. 3-hydroxyflavone, m. 169-71° (EtOH) (Ac derivative m. 109-10.5°); from the mother liquor of the hydrolysis was

isolated 0.19 g. unchanged VII. 1-**Thiaflavanone** (IX) (5 g.), 2.44 g. HONH2.HCl, and 3.3 g. NaOAc in 70 cc. EtOH and 25 cc. **H2O** boiled gently 4 hrs. and cooled gave 3.77 g. IX oxime (X), m. 183° (EtOH). Pd-C (1 g.) in 40 cc. AcOH saturated with H, 1.5 g. X in 100 cc. AcOH added, the mixture hydrogenated at room temperature and normal pressure (2 molar equivs. H absorbed after 24 hrs.), the solution filtered and evaporated in vacuo, the residue dissolved in 300 cc. hot 2.5% HCl, and the solution filtered and treated with 10 cc. concentrated HCl gave 1.15 g. XI.HCl, m. 265°; repeated recrystn. from 2.5% HCl gave anal. XI.HCl, m. 275-6°. IX (2 g.) in 100 cc. absolute Et2O added dropwise during .apprx.1 hr. to a cold suspension of 2 g. LiAlH4 in 100 cc. absolute Et2O, the mixture stirred 1 hr. at room temperature, boiled gently 2 hrs., cooled, treated dropwise with 2.5 cc. HCO2Me, and added dropwise to 200 cc. 10% HCl containing 200 g. ice, the Et2O phase separated, the aqueous phase made alkaline with 10% aqueous NaOH with cooling and extracted with Et2O, the combined Et2O solns. dried and evaporated, and the residue recrystd. from 5% HCl gave 0.63 g. XI.HCl, m. 274-5° (2.5% HCl), **identical** (mixed m.p. and uv spectrum) with XI.HCl prepared above. A cold solution of 0.18 g. XI.HCl made weakly alkaline with 2% aqueous NaOH gave 0.12 g. XI, m. 118° (petroleum ether). X (8g.) in 15.2 cc. absolute C5H5N treated at 0° with 7.3 g. 4-MeC6H4SO2Cl in 15 cc. absolute C5H5N and the solution let stand 24 hrs. at room temperature and poured into 200 cc. 10% HCl containing 100 g. ice gave 12.3 g. tosylate (XII) of X, m. 168-9° (decomposition) (MeOH). To 9.1 g. XII in 132 cc. absolute C6H6 was added dropwise a cold KOEt solution (prepared from 0.96 g. K and 23 cc. absolute EtOH) with cooling, the solution kept 24 hrs. at room temperature, filtered, and extracted 5 times with 30 cc. N HCl, and the combined exts. treated with 8 cc. concentrated HCl and kept 12 hrs. to give 4.29 g. 3-amino-1-**thiaflavanone**-HCl (XIII.HCl), m. 215°, which (0.7 g.) shaken 24 hrs. at room temperature with 20 cc. saturated aqueous NaOAc gave 0.5 g. XIII, m. 104° (cyclohexane). Pertinent uv data were given.

L21 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1960:44624 HCAPLUS Full-text
DOCUMENT NUMBER: 54:44624
ORIGINAL REFERENCE NO.: 54:8799b-i,8800a-d
TITLE: Plant Substances. X. Isolation of the crystalline components of Helichrysum arenarium
AUTHOR(S): Vrkoc, J.; Herout, V.; Sorm, F.
CORPORATE SOURCE: Ceskoslov. akad. ved., Prague
SOURCE: Collection of Czechoslovak Chemical Communications (**1959**), 24, 3938-54
CODEN: CCCCAK; ISSN: 0010-0765
DOCUMENT TYPE: Journal
LANGUAGE: German

AB The ground domestic drug (4 kg. was extracted with petr. ether and then extracted with 96% EtOH. The petr. ether extract gave 2 g. yellow compound (I), m. 192-4° (C6H6), and 79 g. filtrate a; the EtOH extract gave 1.5 g. (-)-inositol, m. 245-8° (EtOH) (decomposition), [α]20D -72.0 ± 2° (c 2.9, **H2O**) [characterized as the acetate, m. 99-100° (aqueous MeOH), [α]20D - 11 ± 0.5° (c 7.5, CHCl3), and benzoate m. 250-2° (EtOH), [α]20D -66° (c 2.2, CHCl3)], and 323.5 g. filtrate b. Washing the solution of filtrate a in 2 l. petr. ether with 1 l. 60% aqueous EtOH, and evaporating gave 70 g. fraction A; evaporating the aqueous ethanolic washings, dissolving the residue in CHCl3, and evaporating gave 10 g. fraction B. Extracting 3 times the solution of the filtrate b in 2 l. 60% aqueous EtOH with 1 l. C6H6, and evaporating the combined exts. gave 40 g. fraction C. Extracting further the aqueous ethanolic layer with 1 l. CHCl3, and then 6 times with 1 l. CHCl3 containing 25% EtOH, and evaporating the combined CHCl3-EtOH exts. gave 69 g. fraction. The

aqueous ethanolic residue containing sugars and mineral salts was not examined The fraction A contained 56 g. neutral and 14 g. acid portion. Chromatography of the neutral portion (25 g.) on Al2O3 gave: a paraffin, C29H60, m. 63-5°; 0.4 g. aliphatic ketone, C20H40O, m. 71-2° (Me2CO-iso-Pr2O); a mixture of higher aliphatic alcs., C22H46O, m. 72° (EtOAc-Me2CO); a steroid giving a pos. Liebermann-Burchardt reaction, m. 145-7° (Me2CO), [α]20D -25.2 ± 1.5° (c 1.3, CHCl) [acetate m. 131-2° (MeOH), [α]20D -28.4 ± 0.7° (c 2.4, CHCl3)]; campesterol, needles, m. 157-8° (Me2CO), [α]20D -35.5 ± 1.3° (c 1.6, CHCl3) [acetate m. 137-8° (MeOH), [α]20D -41.0 ± 1.5° (c 1.2, CHCl3)]. Steam distillation of the acid portion (14 g.) of fraction A gave 1.5 g. Na salts of the volatile acids (AcOH, butyric, valeric, caproic, and probably also pelargonic acid, as shown by paper chromatography) and 13 g. nonvolatile acids (lignoceric, palmitic, and elaidic acid). Chromatography of fraction B on 700 g. 2:1 magnesol-kieselguhr saturated with 175 ml. **H2O** gave: 1.2 g. red phenolic compound (II), 72.04% C and 9.85% H, b0.6 200° (bath temperature) (a brown-red color with FeCl3); 0.7 g. compound, C18H16O7 (III), containing 3 MeO groups, orange, m. 151-2° (MeOH) (giving with FeCl3 a green, later a brown coloration) [diacetate m. 168-70° (MeOH); di-Me derivative m. 89° (Et2O-iso-Pr2O) (no reaction with FeCl3)]; I, C21H24O7, m. 192-4° (EtOAc) (giving a gray-green color with FeCl3) [triacetate m. 141-2° (EtOH)]; 5-methoxy-7-hydroxyphthalide (IV), m. 182-4° (CHCl3-EtOH) (purple color with FeCl3) [7-acetoxy analog m. 140-1° (EtOAc); 5,7-dimethoxyphthalide (V) m. 151-2° (Me2CO)]. I, II, and III differ in their **solubility** and other properties (no reaction with Mg and aqueous HCl) from the group of flavanoids. Fraction C gave 19 g. acid portion (probably higher aliphatic acids) and 21.5 g. neutral portion, from which 1.5 g. steroidal sapogenin (steroline), C35H59O7 (sic), was filtered off, m. 280-90° (dioxane) (decomposition), [α]20D -30.2 ± 2° (c 1.2, C5H5N) (giving a pos. Liebermann-Burchardt reaction) [triacetate m. 163-4° (EtOH)]. The filtrate (20 g.) gave by chromatography on 1 kg. neutral Al2O3 (activity IV-V) 1.2 g. diterpenic alc., C20H34O, leaflets, m. 145-6° (Et2OEtOH) [acetate m. 128° (EtOH)], and 0.5 g. IV. Chromatography of fraction D on 850 g. silon (poly-ε-caprolactam) powder and elution with **H2O**, aqueous MeOH, and MeOH gave: glucose (VI); 5-methoxy-7-glucosylphthalide (VIII), needles, m. 194-5° (**H2O**), [α]20D -49.3 ± 5° (c 0.4, C5H5N) (characterized by hydrolysis with 1% aqueous H2SO4 to IV and VI); 0.5 g. IV; 5,7-dihydroxyphthalide (VIII), m. 245-8° (90% aqueous MeOH) (decomposition) (giving a purple color with FeCl3 and characterized as V); 2 g. naringenin (IX) 5-glucoside (X), m. 235-7° (MeOH), [α]20D -77.2 ± 2° (c 1.0, C5H5N) [**identical** with salipurposide of Charaux and Rabat.acte.e (C.A. 25, 4553)]; 1.8 g. IX 5-diglucoside (XI), m. 158-60° (90% aqueous MeOH), probably **identical** with glycoside A of Jerzmanowska [Acta Polon. Pharm. 13, 301(1956)] and Naringenin glucoside of Hansel and Heise (C.A. 52, 14088f); kaempferol (XII) 3-diglucoside (XIII), m. 173-4° (90% aqueous MeOH); apigenin (XIV) glucoside (XV), m. 247-8° (MeOH), [α]20D -41.1 ± 1° (c 1.8, C5H5N); isosalipurposide (XVI), an orange oil giving a neg. reaction with Mg and aqueous HCl; IX, m. 248-9° (60% aqueous MeOH); XIV, yellow microcrystals, m. 345-7° (EtOH) (acetate m. 184°). Mg and aqueous HCl gave a purple coloration with X and XI (reaction of **flavanones**), and an orange one with XIII and XV (reaction of flavones). FeCl3 gave a brown-green coloration with EtOH solns. of X, XI, and XIII, and a brown-purple coloration with ethanolic XV. Boiling 2 hrs. 0.2 g. X, with 15 ml. 1% H2SO4 gave IX and VI. Adding excess ether-CH2N2 to 0.3 g. X in 30 ml. MeOH, evaporating and hydrolyzing the sirupy residue with 20 ml. 1% aqueous H2SO4 for 2 hrs. at the b.p. gave 0.1 g. 4,7-dimethoxy-5-**hydroxyflavanone** (XVII), m. 117-19° (EtOH). Refluxing 6 hrs. 0.15 g. X, 50 ml. anhydrous Me2CO, 0.5 ml. Me2SO4, and 3 g. K2CO3 gave 2,4,4'-trimethoxy-6'-**hydroxychalcone**, m. 113° (EtOH) (neg. reaction with Mg and aqueous HCl), obtained similarly also from XI. Adding excess CH2N2 in Et2O to 0.2 g. XI in 50 ml. MeOH gave a crystalline compound, m. 120-1° (EtOH), whose hydrolysis with 1% H2SO4 yielded XVII. Hydrolysis of XIII with boiling 1%

H2SO4 gave VI and XII, m. 278-9° (MeOH-**H2O**); acetate m. 182-3°. Methylation of XIII with CH2N2 gave 4',5,7-trimethoxy-3-hydroxyflavone (XVIII) 3-diglucoside, m. 131-2° (MeOH) (no coloration with FeCl3), whose hydrolysis with 1% H2SO gave XVIII, m. 150-1° (90% aqueous MeOH). Acid hydrolysis of XV and XVI gave XIV and IX, resp. Cyclization of XVI according to Zempl.acte.en, et al. (C.A. 37, 62645), gave X. Ultraviolet and infrared spectra of some compds. described were given.

L21 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1957:43321 HCAPLUS Full-text
DOCUMENT NUMBER: 51:43321
ORIGINAL REFERENCE NO.: 51:8081c-f
TITLE: Soluble **flavonoids**. I. The constituent of Polygonum thunbergii Sieb et Zucc
AUTHOR(S): Tatsuta, Haruo; Tsukiura, Hiroshi; Fujise, Shinichiro
CORPORATE SOURCE: Tohoku Univ., Sendai
SOURCE: Science Repts. Tohoku Univ. First Ser. (**1956**), 39, 236-8
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Whole fresh weeds of Polygonum thunbergii Sieb et Zucc. were extracted with MeOH giving light yellow crystals, m. 285-7° (1 mole **H2O** crystallization) It was **identified** as persicarin (I), 3-KSO3- ester of isorhamnetin (3,4',7-trihydroxy-3'-methoxyflavone), by its m.p., analyses, **solubility**, color reactions with FeCl3 (dark green), Mg-concentrated HCl (light red), Zn-concentrated HCl (red), and Al-concentrated HCl (green fluorescence with flavanol derivs. not with **flavanone** derivs.), and its ultraviolet absorption spectrum. Hydrolysis of I gave yellow crystals, m. 305-7°, **identified** by acetylation as the tetra-Ac derivative, m. 205-6°, of isorhamnetin. Presence of K was established as chloroplatinate. The position of SO3K was ascertained by reaction with diazomethane yielding the 3-KSO3- ester of 3',4',5,7-tetramethoxyflavanol, m. 179-85° (decomposition), hydrolyzed to 3',4',5,7-tetramethylquercitin, m. 192.5-3.5°, a known compound Acetylation of I gave isorhamnetin tetraacetate, m. 205°.

RESULTS FROM MEDLINE, BIOSIS, EMBASE, WPIDS, JAPIO, AGRICOLA, CABA, CROPB, CROPR, CROPU, FSTA, FROSTI, AND LIFESCI

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=> d que stat l23
L1             5 SEA FILE=REGISTRY ABB=ON  FLAVONOIDS?
L4             1 SEA FILE=REGISTRY ABB=ON  (FLAVONES OR FLAVONOLS OR FLAVANONES
                 OR FLAVANONOLS OR ISOFLAVONES OR ANTHOCYANINS OR FLAVANOLS OR
                 CHALCONES OR AURONES)/CN
L10        32689 SEA FILE=HCAPLUS ABB=ON  L1 OR ?FLAVONOIDS?
L11          278 SEA FILE=HCAPLUS ABB=ON  L10 AND ?SOLUBIL?
L13           58 SEA FILE=HCAPLUS ABB=ON  L11 AND (L4 OR ?FLAVANON? OR ?ANTHOCYA
                 NIN? OR ?CHALCON? OR ?AURON?)
L14            1 SEA FILE=REGISTRY ABB=ON  WATER/CN
L15           20 SEA FILE=HCAPLUS ABB=ON  L13 AND (L14 OR H2O OR ?WATER?)
L16           58 SEA FILE=HCAPLUS ABB=ON  L13 OR L15
L17           32 SEA FILE=HCAPLUS ABB=ON  L16 AND (?FOOD? OR ?DRINK? OR
                 ?BEVERAG? OR ?MEDICIN? OR ?QUASI?(W)?DRUG? OR ?QUASIDRUG? OR
                 ?COSMET? OR ?ORAL?(W)?PREP? OR ?DENT? OR ?TOOTH? OR ?TEETH? OR
                 ?MOUTH? OR ?AROMATIC? OR ?DEODOR? OR ?DETERG?)
L19            8 SEA FILE=HCAPLUS ABB=ON  L17 AND (?PHYSIOL? OR ?METHOD?)
L20           32 SEA FILE=HCAPLUS ABB=ON  L17 OR L19
L22           74 SEA L20
L23           60 DUP REMOV L22 (14 DUPLICATES REMOVED)


=> d ibib abs l23 1-60

L23  ANSWER 1 OF 60  WPIDS COPYRIGHT 2007       THE THOMSON CORP on STN
ACCESSION NUMBER:     2007-374152 [35]   WPIDS
DOC. NO. CPI:         C2007-135714 [35]
TITLE:                Topical preparation useful in cosmetics and
                      quasi-drug, for moisturizing and
                      improving glossiness and fairness of skin, contains
                      phosphorylated sugar as main ingredient
DERWENT CLASS:        B05; D21
INVENTOR:             KAMASAKA H; KURIKI T; NISHIMURA T; SUGIMOTO K; TANAKA T
PATENT ASSIGNEE:      (EZAK-C) EZAKI GLICO CO LTD
COUNTRY COUNT:        115

PATENT INFO ABBR.:

      PATENT NO      KIND DATE     WEEK     LA  PG          MAIN IPC
      ---------------------------------------------------------------
      WO 2007040027   A1 20070412 (200735)* JA  81[0]

APPLICATION DETAILS:

      PATENT NO      KIND                    APPLICATION    DATE
      ---------------------------------------------------------------
      WO 2007040027 A1                       WO 2006-JP318203 20060913

PRIORITY APPLN. INFO: JP 2005-292362       20051005
AN   2007-374152 [35]   WPIDS
AB    WO 2007040027 A1   UPAB: 20070604
      NOVELTY - A topical preparation contains a phosphorylated sugar as main
      ingredient.
      USE - In cosmetics (such as milky lotion, skin lotion, cream, shampoo or face
      wash) and quasi-drug, for moisturizing and improving glossiness and fairness
      of skin.
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ADVANTAGE - The external preparation effectively moisturizes and improves glossiness and fairness of applied skin. The preparation has excellent stability and is highly safe to use.

L23 ANSWER 2 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2007-283356 [27] WPIDS
DOC. NO. CPI: C2007-103824 [27]
TITLE: **Water**-soluble formulation useful for treating cancer, diabetes and obesity, comprises prenyl flavonoid or prenyl flavonoid metabolite, and non-ionic surfactant
DERWENT CLASS: A96; B02; B07; D13; D21
INVENTOR: KUHRTS E
PATENT ASSIGNEE: (BIOA-N) BIOACTIVES INC
COUNTRY COUNT: 113

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2007016578	A2	20070208	(200727)*	EN	35[1]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2007016578	A2	WO 2006-US29962	20060731

PRIORITY APPLN. INFO: US 2005-703677P 20050729
AN 2007-283356 [27] WPIDS
AB WO 2007016578 A2 UPAB: 20070426
NOVELTY - A **water**-soluble formulation comprises (a) prenyl flavonoid or prenyl flavonoid metabolite, and (b) non-ionic surfactant.
DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are included for the following:
(1) dissolution of prenyl flavonoid in **water**, which involves combining prenyl flavonoid with non-ionic surfactant to form surfactant-prenyl flavonoid mixture, and combining the obtained mixture with **water**;
(2) treatment of cancer, obesity, diabetes, cardiovascular disease, dyslipidemia, vision loss associated with age-related macular degeneration, disease due to high cholesterol and diabetic retinopathy, which involves administering the formulation; (3) treatment of vascular endothelial growth factor (VEGF)-mediated diseases, acyl-CoA:cholesterol acyl transferase (ACAT)-mediated diseases and acyl coenzyme A:diacyl glycerol acyl transferase (DGAT)-mediated diseases, which involves administering the formulation; and (4) **method** of enhancing the bioavailability of prenyl flavonoid or prenyl flavonoid metabolite, which involves (a) combining the prenyl flavonoid or prenyl flavonoid metabolite and non-ionic surfactant to form a surfactant-prenyl flavonoid mixture, and (b) administering the mixture to the patient for enhancing the bioavailability of prenyl flavonoid or prenyl flavonoid metabolite. ACTIVITY - Cytostatic; Ophthalmological; Antidiabetic; Anorectic; Cardiovascular-Gen.; Antilipemic. No biological data given.
MECHANISM OF ACTION - Cholesterol-Antagonist; VEGF-Antagonist; ACAT-Inhibitor; DGAT-Inhibitor.
HepG2 cells were treated with xanthohumol of various concentrations. The incorporation of 14C-acetic acid into cholesterol was examined using HepG2 cell assay system. The xanthohumol showed excellent inhibitory effect with respect to acetate incorporation into cholesterol in a dose-responsive manner. IC50 value of xanthohumol was found to be 20 muM. Hence, concluded that xanthohumol had excellent cholesterol synthesis inhibitory effect.

USE - As non-alcoholic formulation and non-aprotic solvated formulation, and oral formulation (such as soft gel capsule, tablet, **beverage**, injectable formulation and topical formulation), for treating cancer, vascular endothelial growth factor mediated diseases, acyl-CoA:cholesterol acyl transferase-mediated diseases and acyl coenzyme A:diacyl glycerol acyl transferase-mediated diseases, such as vision loss associated with age-related macular degeneration, diabetic retinopathy, obesity, diabetes, cardiovascular disease and dyslipidemia (all claimed).

ADVANTAGE - The formulation enhances aqueous **solubility** and bioavailability of prenyl **flavonoids**. The formulation effectively enhances the metabolic rate or energy level of patients. The formulation accelerates cholesterol excretion by liver, and inhibits absorption of cholesterol in intestines. The formulation prevents accumulation of lipid in arterial wall without affecting the plasma lipid levels.

DESCRIPTION OF DRAWINGS - The figure shows the cholesterol synthesis inhibitory effect of xanthohumol in HepG2 cells.

L23 ANSWER 3 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2007-598585 [57] WPIDS
CROSS REFERENCE: 2007-494830; 2007-494831; 2007-494832; 2007-494833; 2007-543062; 2007-570111; 2007-598581; 2007-598582; 2007-598583; 2007-598584; 2007-598586; 2007-598587; 2007-598588; 2007-610860; 2007-610861; 2007-610862; 2007-610863; 2007-610864; 2007-610865; 2007-620590; 2007-685964; 2007-689107; 2007-689930; 2007-697938; 2007-700753
DOC. NO. CPI: C2007-214991 [57]
TITLE: Functional sweetener composition for **food**, **beverage**, pharmaceutical, tobacco, nutraceutical, oral hygienic or **cosmetic**, comprises calcium source(s), high-potency sweetener(s), and sweet taste improving composition(s)
DERWENT CLASS: A97; B04; B05; D11; D13; E33
INVENTOR: DUBOIS G E; PRAKASH I
PATENT ASSIGNEE: (COKE-C) COCA-COLA CO
COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20070116833	A1	20070524	(200757)*	EN	59[5]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20070116833	A1 Provisional	US 2005-739124P	20051123
US 20070116833	A1 Provisional	US 2005-739302P	20051123
US 20070116833	A1 Provisional	US 2006-805209P	20060619
US 20070116833	A1 Provisional	US 2006-805216P	20060619
US 20070116833	A1	US 2006-556059	20061102

PRIORITY APPLN. INFO: US 2006-556059 20061102
US 2005-739124P 20051123
US 2005-739302P 20051123
US 2006-805209P 20060619
US 2006-805216P 20060619
AN 2007-598585 [57] WPIDS

CR 2007-494830; 2007-494831; 2007-494832; 2007-494833; 2007-543062; 2007-570111; 2007-598581; 2007-598582; 2007-598583; 2007-598584; 2007-598586; 2007-598587; 2007-598588; 2007-610860; 2007-610861; 2007-610862; 2007-610863; 2007-610864; 2007-610865; 2007-620590; 2007-685964; 2007-689107; 2007-689930; 2007-697938; 2007-700753

AB US 20070116833 A1 UPAB: 20070907

NOVELTY - A functional sweetener composition comprises at least one calcium source; at least one high-potency sweetener; and at least one sweet taste improving composition.

DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for:

(1) functional sweetened composition comprising a sweeteneable composition; at least one calcium source; at least one high-potency sweetener; and at least one sweet taste improving composition; and (2) functional **beverage** comprising the sweetened composition.

ACTIVITY - Cardiovascular-Gen.; Antilipemic; Antidiabetic; Osteopathic; Antiinflammatory; Immunosuppressive; Nootropic; Neuroprotective; Coagulant; Muscular-Gen.; Cytostatic; Hypotensive; Antimicrobial.

MECHANISM OF ACTION - None given.

USE - The composition is used in **food**, **beverage** , pharmaceutical, tobacco, nutraceutical, oral hygienic, or **cosmetic**. The **beverage** is non-carbonated **beverage**, carbonated **beverage** such as cola, citrus-flavored **beverage** e.g. lemon-lime flavored **beverage** or orange-flavored **beverage**, or root beer, fruit juice, fruit-flavored, or fruit-containing **beverage**, vegetable juice or vegetable containing **beverage**, tea, coffee, dairy component, sports **drink**, energy **drink**, or flavored **water** (all claimed). The composition is used in dairy products; bakery products; desserts such as yogurt, jellies; frozen **foods**; cold confections, e.g. ice cream; general confections, e.g., cakes; rice cakes and snacks; table top products; general sugar confections such as chewing gum; sauces including fruit flavored sauces; edible gels; cremes including butter cremes; jams including strawberry jam; breads including sweet breads; spice; general condiments including seasoned soy sauce; processed agricultural products, livestock products or **seafood**; processed meat products such as sausage; retort **food** products, pickles, preserves boiled in soy sauce, delicacies, side dishes; snacks such as potato chips; cereal products; drugs or **quasi-drugs**; personal care products such as **mouth** freshening agents; tobacco products such cigarette; animal feed; nutraceutical products that may provide **medicinal** or health benefits, including the prevention and treatment of disease (e.g., cardiovascular disease and levels of high cholesterol in the blood, diabetes, osteoporosis, inflammation, or autoimmune disorders); and orally ingestible compositions useful for promoting bone strength, reducing the risk of osteoporosis; enhancing intracellular regulation, nerve impulse transmission, blood clotting, muscle contraction, and nerve and heart function, and preventing colon cancer, hypertension, and pathogen-induced infections.

ADVANTAGE - The composition provides a more sugar-like temporal profile, including sweetness onset and sweetness linger, and/or a more sugar-like flavor profile. The composition improves the taste of ingestible compositions to promote their use and the resulting health benefits.

DESCRIPTION OF DRAWINGS - The figure is a powder x-ray diffraction scan of rebaudioside A polymorph Form 1 on a plot of the scattering intensity versus the scattering angle 20.

L23 ANSWER 4 OF 60 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2007154646 EMBASE Full-text

TITLE: Structure-activity relationships of flavonoid-induced cytotoxicity on human leukemia cells.

AUTHOR: Plochmann K.; Korte G.; Koutsilieri E.; Richling E.; Riederer P.; Rethwilm A.; Schreier P.; Scheller C.

CORPORATE SOURCE: C. Scheller, University of Wurzburg, Institute of Virology and Immunobiology, Versbacher Strasse 7, 97078 Wurzburg, Germany. scheller@vim.uni-wuerzburg.de
SOURCE: Archives of Biochemistry and Biophysics, (1 Apr 2007) Vol. 460, No. 1, pp. 1-9.
Refs: 27
ISSN: 0003-9861 E-ISSN: 1096-0384 CODEN: ABBIA4
PUBLISHER IDENT.: S 0003-9861(07)00069-0
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
025 Hematology
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 1 May 2007
Last Updated on STN: 1 May 2007

AB The aim of this study was to **identify** structure elements in **flavonoids** that are associated with enhanced cytotoxic activity. We determined the cytotoxicity (EC(50)) of 23 different **flavonoids** , including O-methylated and glucuronidated metabolites, on the human leukemia cell line Jurkat E6-1 by analyzing cell death triggered after 24 and 48 h. By comparing the cytotoxicity of selected molecules that differ in only one structure element, we **identified** several structure-function relationships associated with enhanced cytotoxicity, including the presence of a 2-3 double bond, the presence of a 4-carbonyl group and ortho- compared to meta-hydroxylation in the B ring. Molecules with a 3-hydroxyl group exhibited significantly lower cytotoxicity than their non-hydroxylated counterparts. O-Methylation and glucuronidation were associated with a significant increase in cytotoxicity, suggesting that metabolites found in vivo are more active than unmodified **flavonoids**. We **identified** the **solubility** maximum of the tested **flavonoids** in culture medium and found a negative correlation between maximum **solubility** and cytotoxicity. The results of our study may help to **identify** novel flavonoid structures with optimized cytotoxic activity to be tested for anti-cancer treatment.

L23 ANSWER 5 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2007-009305 [01] WPIDS
DOC. NO. CPI: C2007-003379 [01]
TITLE: New polymer comprising at least two repeat units of **flavonoids**, for use in treating e.g. cancers, obesity and viral infections
DERWENT CLASS: A18; A25; A96; B04; B07; D16
INVENTOR: BRAUNHUT S J; BRUNO F F; FOLEY K; KUMAR J; MCINTOSH D; NAGARAJAN R; NAGARAJAN S; SAMUELSON L A
PATENT ASSIGNEE: (USSA-C) US SEC OF ARMY; (UYMA-N) UNIV MASSACHUSETTS LOWELL
COUNTRY COUNT: 111

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2006116532	A2	20061102	(200701)*	EN	118[14]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

WO 2006116532 A2 WO 2006-US15872 20060427

PRIORITY APPLN. INFO: US 2005-675822P 20050428
AN 2007-009305 [01] WPIDS
AB WO 2006116532 A2 UPAB: 20070102
NOVELTY - A polymer (A) comprising at least two repeat units of **flavonoids** or their salts, is new.
DETAILED DESCRIPTION - Polymer (A) comprising at least two repeat units of **flavonoids** of formula (1-4) or their salts, is new. n = 0-170; and sum of n = 2-170.
Where (1) is in stereoisomeric forms, and where each repeat unit is optionally substituted and 1-4 hydrogen atoms in each repeat units attached to the oxygen or carbon on the asterisk are **independently** replaced by a polymer link.
INDEPENDENT CLAIMS are included for: (1) a biocompatible composition comprising a biocompatible solvent and an oligo/polyflavanoid or its salt, solvate, or complex; (2) a **method** for synthesizing a polymer comprising polymerizing an optionally substituted flavanoid, phenolic acid, hydroxycinnamic acid or phytochemical with a polymerization agent in the presence of a biocompatible polymerization **solubilizer**; and (3) a **method** of synthesizing (A). ACTIVITY - Cytostatic; Cardiant; Antiinflammatory; Virucide; Anti-HIV; Anorectic. The ability of (A) to treat cancer was assessed against low metastatic breast adenocarcinoma. The results showed that after 6 days of treatment there was a significant inhibition of the cancer cells and at day 9, there was only 15% of the cells remained.
MECHANISM OF ACTION - None given.
USE - (A) Is useful for inhibiting the onset of or treating a subject having or at risk of cancer (head, neck, esphageal, tongue or pharyngeal cancer), where the subject (preferably a human) is treated therapeutically or prophylactically and the cancer is breast cancer, colon carcinoma (both preferred), fibrosarcoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, chordoma, angiosarcoma, endotheliosarcoma, lymphangiosarcoma, lymphangioendotheliosarcoma, synovioma, mesothelioma, Ewing's tumor, leiomyosarcoma, rhabdomyosarcoma, pancreatic cancer, ovarian cancer, prostate cancer, squamous cell carcinoma, basal cell carcinoma, adenocarcinoma, sweat gland carcinoma, sebaceous gland carcinoma, papillary carcinoma, papillary adenocarcinomas, cystadenocarcinoma, medullary carcinoma, bronchogenic carcinoma, renal cell carcinoma, hepatoma, bile duct carcinoma, choriocarcinoma, seminoma, embryonal carcinoma, Wilm's tumor, cervical cancer, testicular tumor, lung carcinoma, small cell lung carcinoma, bladder carcinoma, epithelial carcinoma, glioma, astrocytoma, medulloblastoma, craniopharyngioma, ependymoma, pinealoma, hemangioblastoma, acoustic neuroma, oligodendroglioma, meningioma, melanoma, neuroblastoma, retinoblastoma, leukemias e.g. acute lymphocytic leukemia and acute myelocytic leukemia, chronic leukemia and polycythemia vera, lymphoma, multiple myeloma, Waldenstrobm's macroglobulinemia, and heavy chain disease. (A) Is also useful for treating cardiac damage (inflammation, fibrosis or cell infiltration of cardiac tissue) caused by immune rejection of cardiac tissue and is in cardiac tissue transplanted into the subject; a viral infection (caused by a virus such as picornavirus; parvoviridae; hepatitis virus; papovavirus; adenovirus; herpes virus, poxvirus; calicivirus; arbovirus; coronavirus; a retrovirus; rhabdovirus; paramyxovirus; orthomyxovirus; arenavirus; human T-cell lymphotrophic virus; human papillomavirus; and human immunodeficiency virus, preferably human immunodeficiency virus-1, human immunodeficiency virus-2, cytomegalovirus, epstein barr virus, roseola infantum, varicella zoster virus, herpes zoster, herpes simplex virus, and hepatitis virus); and obesity (all claimed).
ADVANTAGE - (A) Is biocompatible (claimed). The preparation of (A) do not involve the use of toxic chemicals or solvents, and hence no harmful by-products are formed in the preparation. The process: is a one-pot green

reaction that yields oligo/polyflavanoid products with potential pharmaceutical applications; and is simple and environmentally benign.

L23 ANSWER 6 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2006-252785 [26] WPIDS
DOC. NO. CPI: C2006-082351 [26]
TITLE: Topical composition, used to treat skin conditions such as eczema, seborrhea, psoriasis, xerosis, neoplastic growths, dermatitis, folliculitis, rosacea or acne, comprises phosphorylated polyphenol in combination with carrier
DERWENT CLASS: B05; D21
INVENTOR: CORSTJENS H; DECLERCQ L; MAES D; SCHELKENS G; VAN BRUSSEL W
PATENT ASSIGNEE: (AJIN-N) AJINOMOTO OMNICHEM SA; (ESTE-N) ESTEE LAUDER COORDINATION CENT NV
COUNTRY COUNT: 107

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2006029484	A1	20060323	(200626)*	EN	47[4]	
EP 1799228	A1	20070627	(200743)	EN		
AU 2004323347	A1	20060323	(200759)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2006029484	A1	WO 2004-BE132	20040914
EP 1799228	A1	EP 2004-761493	20040914
EP 1799228	A1	WO 2004-BE132	20040914
AU 2004323347	A1	AU 2004-323347	20040914
AU 2004323347	A1	WO 2004-BE132	20040914

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
EP 1799228	A1	Based on	WO 2006029484	A
AU 2004323347	A1	Based on	WO 2006029484	A

PRIORITY APPLN. INFO: WO 2004-BE132 20040914
AN 2006-252785 [26] WPIDS
AB WO 2006029484 A1 UPAB: 20060421
NOVELTY - Topical composition (A), for application to a keratinous tissue, comprises at least one phosphorylated polyphenol (B) in combination with a carrier.
DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for the following: (1) a **method** of regulating a skin condition, which comprises applying to the skin a composition comprising (B); (2) a **method** of regulating the effects of reactive oxygen species on a cell of a keratinous tissue, which comprises applying to the cell a composition comprising (B);
(3) a **method** of delayed delivery of (B) to the skin, which comprising applying (B) to the skin in phosphorylated form; and (4) a **method** for rendering **water**-soluble, a **water**-insoluble polyphenol, which comprises phosphorylating the insoluble polyphenol to render the polyphenol **water**-soluble. ACTIVITY - Dermatological; Antipsoriatic; Antiinflammatory; Antiseborrheic.

MECHANISM OF ACTION - None given.
USE - Composition (A) is used to treat skin conditions such as eczema, seborrhea, psoriasis, xerosis, neoplastic growths, dermatitis, folliculitis, rosacea, acne or signs of skin ageing (claimed). D-squame tape strippings were collected on the inner lower arm of a panelist. Layer 13 and 14 were pooled and put in a test tube and extracted with 700 mul of 100 mM phthalic acid and 0.25% Triton-X100 (RTM) at pH 5.6 for 90 minutes at room temperature with gentle shaking. The extractable fraction was transferred to another vial and mixed with phosphorylated resveratrol stock-solution. The concentration of phosphorylated resveratrol during the incubation was 0.22 mg/ml or 0.47 mM. At various incubation time points a 25 mul aliquot of the incubation mixture was diluted in 25 mul o-phosphoric acid and 50 mul of MeOH and injected onto an HPLC system.
Incubation of phosphorylated resveratrol with the extractable fraction of SC D-squame tape strippings resulted in a time **dependent** formation of resveratrol, while the triphosphorylated resveratrol (completely phosphorylated) decreased gradually. Time **dependent** formation of monophosphorylated resveratrol was also observed. Overall amounts of the di-phosphorylated form of resveratrol did not change significantly as a function of time, which indicated that the formation of di-phosphorylated resveratrol (from completely phosphorylated resveratrol) is equally fast as the conversion of di- to mono-phosphorylated resveratrol. The present experiment showed that the phosphorylated resveratrol would be dephosphorylated by enzymes present in the skin. Enzymatic dephosphorylation of phosphorylated resveratrol e.g. by in situ acid phosphatase activity in the skin would reconstitute the original resveratrol with a concomitant increase in biological activity. The results showed that acid phosphatase present on the skin and sampled via D-squame tape strippings was able to replace phosphate groups on phosphorylated resveratrol by hydroxyl groups. This resulted in a time **dependent** formation of resveratrol and a corresponding decrease of phosphorylated resveratrol, thereby supporting the concept of delayed release of the active resveratrol molecule, or any phosphorylated polyphenol, by the action of stratum corneum enzymes when the phosphorylated polyphenol is applied to the skin.
ADVANTAGE - Composition (A) provides a improved stability of biological activity as well as compositional integrity. The phosphorylation of certain polyphenols can increase in their **water solubility**.

L23 ANSWER 7 OF 60 MEDLINE on STN
ACCESSION NUMBER: 2006621945 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 17031041
TITLE: Antioxidative and anti-inflammatory activities of **polyhydroxyflavonoids** of Scutellaria baicalensis GEORGI.
AUTHOR: Huang Wen-Hsin; Lee An-Rong; Yang Ching-Huey
CORPORATE SOURCE: School of Pharmacy, National Defense Medical Center, Taiwan.. wenhsin@mail.ndmctsgh.edu.tw
SOURCE: Bioscience, biotechnology, and biochemistry, (2006 Oct) Vol. 70, No. 10, pp. 2371-80. Electronic Publication: 2006-10-07.
Journal code: 9205717. ISSN: 0916-8451.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200701
ENTRY DATE: Entered STN: 24 Oct 2006
Last Updated on STN: 20 Jan 2007
Entered Medline: 19 Jan 2007

AB The active ingredients of 'golden root' of Scutellaria baicalensis GEORGI (Huang-Qin), a valuable traditional Chinese **medicine**, are **polyhydroxyflavonoids**, namely baicalein, oroxylin A and wogonin. With the objective of overcoming their poor **solubility** and to investigate their structure and activity relationships, baicaleinyl 7-O-sulfate was prepared, and extensive comparative antioxidative and anti-inflammatory tests were conducted. All the **polyhydroxyflavonoids** exhibited significant antioxidative and free-radical scavenging activities. In respect of their nitric oxide (NO) inhibition, wogonin was superior to all the other **flavonoids**, while oroxylin A was most potent in the inhibition of lipid peroxidation. Wogonin proved to be the most potent (82.9% inhibition, $p<0.05$) in its anti-inflammatory activity against carrageenan-induced rat hind paw edema. There was a correlation between the in-vivo anti-inflammatory activity and the in-vitro antioxidative activities.

L23 ANSWER 8 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 703216 FROSTI Full-text
TITLE: Bioavailability of glucosyl hesperidin in rats.
AUTHOR: Yamada M.; Tanabe F.; Arai N.; Mitsuzumi H.; Miwa Y.; Kubota M.; Chaen H.; Kibata M.
SOURCE: Bioscience, Biotechnology, and Biochemistry, 2006, (June), 70 (6), 1386-1394 (32 ref.)
ISSN: 0916-8451
DOCUMENT TYPE: Journal
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The **flavanone** glycoside hesperidin is known to be a primary constituent of Chinpi, a traditional natural **medicine** made from Satsuma mandarin peel. The metabolism and bioavailability of glucosyl hesperidin and hesperidin in rats were evaluated. Following administration of glucosyl hesperidin or hesperidin, metabolite hesperetin glucuronide was found in sera of both groups, while hesperetin glucuronide and non-conjugated hesperetin were excreted in urine of both groups. Serum hesperetin glucuronide appeared more rapidly in rats administered glucosyl hesperidin than in rats administered hesperidin, with the area under the concentration-time curve for this conjugate being more pronounced in the glucosyl hesperidin group. Urinary excretion of metabolites was higher in rats administered glucosyl hesperidin than in rats administered hesperidin. Results indicated that glucosyl hesperidin presented the same metabolic profile as hesperidin, with glucosyl hesperidin being absorbed more rapidly and efficiently than hesperidin owing to its high **water solubility**.

L23 ANSWER 9 OF 60 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2006274195 EMBASE Full-text
TITLE: **Solubility** enhancement of **flavonoids** by cyclosophoraose isolated from Rhizobium meliloti 2011.
AUTHOR: Kang S.; Lee S.; Kwon C.; Jung S.
CORPORATE SOURCE: S. Jung, Department of Microbial Engineering, Konkuk University, Seoul 143-701, Korea, Republic of. shjung@konkuk.ac.kr
SOURCE: Journal of Microbiology and Biotechnology, (May 2006) Vol. 16, No. 5, pp. 791-794.
Refs: 21
ISSN: 1017-7825 CODEN: JOMBES
COUNTRY: Korea, Republic of
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index

039 Pharmacy
004 Microbiology: Bacteriology, Mycology, Parasitology and Virology

LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 27 Jun 2006
Last Updated on STN: 27 Jun 2006

AB Cyclosophoraose (cyclic β-(1,2)-glucan, Cys) isolated from Rhizobium meliloti, a soil microorganism, was used as a **solubility** enhancer for **flavonoids**. The complexes of the cyclic oligosaccharide with **flavonoids** were confirmed through (1)H nuclear magnetic resonance (NMR) spectroscopic analysis. **Flavonoids solubilized** by Cys were quantitatively analyzed through high-performance liquid chromatography (HPLC). Among the **flavonoids** tested, the **solubility** of naringenin was greatly enhanced by Cys, compared with other compounds. The **solubility** of naringenin was enhanced about 7.1-fold by adding 10 mM Cys, compared with a control. (1)H NMR spectroscopic analysis indicated that the H-6 and H-8 protons, which are located on the A ring of naringenin, were greatly shifted upfield upon the complexation with Cys. This result suggested that Cys showed a regioselective interaction with the naringenin molecule upon the complexation, resulting in the **solubility** enhancement of naringenin. .COPYRGT. The Korean Society for Microbiology and Biotechnology.

L23 ANSWER 10 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 689659 FROSTI Full-text
TITLE: Thermal analysis study of flavonoid solid dispersions having enhanced **solubility**.
AUTHOR: Kanaze F.I.; Kokkalou E.; Niopas I.; Georgarakis M.; Stergiou A.; Bikiaris D.
SOURCE: Journal of Thermal Analysis and Calorimetry, 2006, 83 (2), 283-290 (39 ref.)
Published by: Kluver Academic Publishers B.V.
Website: http://www.wkap.nl.
ISSN: 1388-6150
DOCUMENT TYPE: Journal
LANGUAGE: English
SUMMARY LANGUAGE: English

AB **Flavonoids** occur in plant **foods** and provide health benefits in the diet. The aglycones of the **flavanone** glycosides naringin and hesperidin are found in citrus fruits, and have been shown to have antioxidant, antiinflammatory and anticarcinogenic activity. The crystalline phases of these compounds are poorly soluble in **water** , limiting their therapeutic effectiveness. This study investigated solid-dispersion systems with polyvinylpyrrolidone (PVP), polyethylene glycol and mannitol as carrier matrices. The properties of these dispersions were determined by DSC and X-ray diffraction. With PVP, aglycones formed amorphous nanodispersions, greatly improving **solubility**.

L23 ANSWER 11 OF 60 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2006034387 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 16390199
TITLE: Characterization of **flavonoids** and pectins from bergamot (Citrus bergamia Risso) peel, a major byproduct of essential oil extraction.
AUTHOR: Mandalari Giuseppina; Bennett Richard N; Bisignano Giuseppe; Saija Antonella; Dugo Giacomo; Lo Curto Rosario B; Faulds Craig B; Waldron Keith W
CORPORATE SOURCE: Department of Pharmaco-Biology, University of Messina, Vill. SS. Annunziata 98168 Messina, Italy.
SOURCE: Journal of agricultural and food chemistry, (2006 Jan 11)

Vol. 54, No. 1, pp. 197-203.
Journal code: 0374755. ISSN: 0021-8561.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200602
ENTRY DATE: Entered STN: 21 Jan 2006
Last Updated on STN: 23 Feb 2006
Entered Medline: 22 Feb 2006

AB Bergamot peel is an underutilized byproduct of the essential oil and juice-processing industry. As with other Citrus peels, it still contains exploitable components, such as pectins and **flavonoids**. Commercial glycoside hydrolases, specifically a combination of pectolytic and cellulolytic enzymes, **solubilized** a high percentage of the material (81.94%). The flavonoid profile of the peel consisted of characteristic Citrus species **flavanone** rutinosides and neohesperosides derived from naringenin, eriodictyol, and hesperetin. In addition, a number of minor **flavanone** and flavone glycosides, not found in orange and lemon peels, were **identified**. The majority of **flavonoids** were extracted in the two 70% v/v EtOH extractions. Processing this material clearly has economic potential leading to low environmental impact.

L23 ANSWER 12 OF 60 FSTA COPYRIGHT 2007 IFIS on STN DUPLICATE 2
ACCESSION NUMBER: 2006:J0954 FSTA Full-text
TITLE: **Identification** of phenolic compounds in strawberries by liquid chromatography electrospray ionization mass spectroscopy.
AUTHOR: Seeram, N. P.; Lee, R.; Scheuller, H. S.; Heber, D.
CORPORATE SOURCE: Center for Human Nutrition, David Geffen School of Medicine, University of California, Los Angeles, CA 90095, USA. Tel. +1 310 825 6150. Fax +1 310 206 5264. E-mail nseeram(a)mednet.ucla.edu
SOURCE: Food Chemistry, (2006) 97 (1) 1-11
ISSN: 0308-8146
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Strawberry (Fragaria x ananassa Duch.) fruits contain phenolic compounds that have antioxidant, anticancer, antiatherosclerotic and anti-neurodegenerative properties. **Identification** of **food** phenolics is necessary since their nature, size, **solubility**, degree and position of glycosylation and conjugation influence their absorption, distribution, metabolism and excretion in humans. Freeze-dried whole strawberry fruit powder and strawberry fruit extracts were analyzed by liquid chromatography electrospray ionization mass spectrometry (LC-ESI-MS) **methods**. Phenolics were **identified** as ellagic acid (EA), EA-glycosides, ellagitannins, gallotannins, **anthocyanins**, flavonols, flavanols and coumaroyl glycosides. The anthocyanidins were pelargonidin and cyanidin, found predominantly as their glucosides and rutinosides. The major flavonol aglycons were quercetin and kaempferol found as their glucuronides and glucosides. LC-ESI-MS/MS **methods** differentiated EA from quercetin conjugates since both aglycons have **identical** molecular weights (302 g/mol). The **identification** of strawberry phenolics is necessary to generate standardized materials for in vitro and in vivo studies and for the authentication of strawberry-based **food** products. All rights reserved, Elsevier.

L23 ANSWER 13 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-605253 [62] WPIDS
DOC. NO. CPI: C2005-182214 [62]

TITLE: Improving the purity of phenolic compounds from starting material of biological source comprises forming a fraction of the starting material, alkaline aqueous solution and insolubles and separating the insolubles from the alkaline solution
DERWENT CLASS: B05; D13
INVENTOR: EYAL A; PURTLE I; VITNER A
PATENT ASSIGNEE: (CRGI-C) CARGILL INC
COUNTRY COUNT: 106

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005077930	A1	20050825	(200562)*	EN	30[1]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005077930	A1	WO 2005-US4160	20050209

PRIORITY APPLN. INFO: US 2004-543067P 20040209
AN 2005-605253 [62] WPIDS
AB WO 2005077930 A1 UPAB: 20051223
NOVELTY - Process for improving the purity of a phenolic compound from a starting material of biological source comprises: providing the starting material from the biological source comprising a mixture of at least one phenolic compound and at least one non-phenolic compound; forming at least a fraction of the starting material, an alkaline aqueous solution and insolubles; and separating the insolubles from the alkaline solution.
DETAILED DESCRIPTION - Process for improving the purity of a phenolic compound from a starting material of biological source comprises: providing the starting material from the biological source comprising a mixture of at least one phenolic compound having a purity P1 and at least one non-phenolic compound; forming at least a fraction of the starting material, an alkaline aqueous solution having at least a pH of about negative logarithm of dissociation constant of a weak acid (pKa) minus 1.5 (where the pKa is that of the phenolic compound) and insolubles; and separating the insolubles from the alkaline solution (where a purified solution is formed that comprises the purified phenolic compound having a purity P2 and insolubles containing the non-phenolic compound (where P2 is greater than P1 and the insolubles contain less than about 20 % of the phenolic compound present in the starting material)).
USE - The **method** is useful for improving the purity of phenolic compounds from starting materials of biological sources (claimed) to promote their incorporation in a variety of **food, beverage**, dietary supplements and pharmaceutical products.
ADVANTAGE - The **method** provides the purification of phenolic compounds from a variety of plant materials with suitable purity, color, flavor, **solubility** and shelf stability.

L23 ANSWER 14 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2006-028360 [03] WPIDS
DOC. NO. CPI: C2006-009612 [03]
TITLE: Appetite satiation hydrating **beverage** composition contains Hoodia gordonii, Gymnema sylvestre, hydroxycitrate, green tea leaf extract, betaine, piperine, potassium, sodium, Vitamin C, and maltodextrin

DERWENT CLASS: B04; D13
INVENTOR: RIFKIN C H
PATENT ASSIGNEE: (RIFK-I) RIFKIN C H
COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20050276839	A1	20051215	(200603)*	EN	10[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20050276839	A1 Provisional	US 2004-578933P	20040610
US 20050276839	A1	US 2005-149042	20050609

PRIORITY APPLN. INFO: US 2005-149042 20050609
US 2004-578933P 20040610
AN 2006-028360 [03] WPIDS
AB US 20050276839 A1 UPAB: 20060112
NOVELTY - An appetite satiation hydrating **beverage** composition comprising 200-400 mg/L Hoodia gordonii; 200-400 mg/L Gymnema sylvestre; 200-400 mg/L hydroxycitrate; 250-500 mg/L green tea leaf extract, 25-75 mg/L betaine; 2-5 mg/L piperine; 275-475 mg/L potassium; 50-100 mg/L sodium; 100-250 mg/L Vitamin C; and 5-25 g/L maltodextrin, is new.
DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for:
(1) a **food** product, comprising complex carbohydrate(s); chelated electrolyte(s); Hoodia Gordonii Cactus; Gymnema Sylvestre; betaine; and piperine;
(2) a process of manufacturing a liquid composition to be used as a appetite satiation and rehydration **drink**, comprising combining the components in the **food** product with adequate liquid to provide a liquid composition ready for consumption by **drinking**; and
(3) a **method** of reducing one or more symptoms of appetite satiation and dehydration of a human body, comprising administering to a subject an amount of the **food** product.
USE - The composition is useful as an appetite satiation-hydrating **beverage**. It is suited to anyone who desires appetite satiation, has been exposed to above-normal heat or hydration stress, such as those living in hot or humid climates, factory workers, armed forces personnel, police, firemen, airline workers and passengers, in addition to those who engage in exercise.
ADVANTAGE - The composition provides a nutritional supplement that can promote a healthy lifestyle. It satiates the appetite, increases fat metabolism and physical energy, prevents dehydration and/or replaces electrolytes, nutrients and minerals that are lost during periods of activity or stress. It provides appetite satiation and nutrition, thus avoiding the unwanted effects of malnourishment, or unwanted weight increase to over-nourishment.

L23 ANSWER 15 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-565974 [58] WPIDS
DOC. NO. CPI: C2005-171239 [58]
TITLE: Preparing composition for **cosmetic** treatment of keratin materials, e.g. skin or hair, comprises passing fluid, under pressure, through a mass of keratin-protecting agent
DERWENT CLASS: A96; D21; E19
INVENTOR: DE LA METTRIE R; DE L M R

PATENT ASSIGNEE: (OREA-C) L'OREAL SA
COUNTRY COUNT: 40

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
FR 2865646	A1	20050805	(200558)*	FR	31[0]	
EP 1559414	A1	20050803	(200558)	FR		
JP 2005213264	A	20050811	(200558)	JA	45	
US 20050166336	A1	20050804	(200558)	EN		
MX 2005000922	A1	20050801	(200604)	ES		
BR 2005000216	A	20060411	(200627)	PT		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
FR 2865646	A1	FR 2004-851	20040129
US 20050166336	A1 Provisional	US 2004-545188P	20040218
EP 1559414	A1	EP 2005-290141	20050121
MX 2005000922	A1	MX 2005-922	20050121
US 20050166336	A1	US 2005-40001	20050124
JP 2005213264	A	JP 2005-51893	20050131
BR 2005000216	A	BR 2005-216	20050124

PRIORITY APPLN. INFO: FR 2004-851 20040129
AN 2005-565974 [58] WPIDS
AB FR 2865646 A1 UPAB: 20051223
NOVELTY - **Method** for preparing a composition (A) for **cosmetic** treatment of keratin materials comprises percolating a fluid, under a pressure of at least 3 bar, through at least one keratin-protecting agent (B) in solid or pastey form.
DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for the following: (1) (A) prepared by the new **method**; and (2) device for storing a **cosmetic** composition, containing at least one (B) in liquid or pastey form, that comprises a closed housing in which at least one wall is (partly) permeable to fluid under a pressure of at least 3 bar.
USE - (A) are used for treatment of keratin materials, particularly skin but also e.g. hair, nails and eye lashes, especially to protect against pollutants; UV light; free radicals etc.
ADVANTAGE - The **method** is very quick (less than 2 minutes); is easily done by the end-user and produces a more or less concentrated product. The compositions are free of preservatives and avoid the problems of stability and **solubility** associated with conventional formulations. They have limited storage life but are intended for immediate use.

L23 ANSWER 16 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 683062 FROSTI Full-text
TITLE: Characterization of **anthocyanin**-rich waste from purple corncobs (Zea mays L.) and its applications to color milk.
AUTHOR: Jing P.; Giusti M.M.
SOURCE: Journal of Agricultural and Food Chemistry, 2005, (November 2), 53 (22), 8775-8781 (38 ref.)
Published by: American Chemical Society. Website: http://pubs.acs.org/jafc
ISSN: 0021-8561
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Purple corn (Zea mays L.) is rich in **anthocyanins** and is used as a colorant and to prepare desserts and **beverages** in many parts of the world. This study characterised purple corncob **anthocyanin**-rich waste (ARW) to find a suitable **food** application. **Solubility** and composition were evaluated, as well as pigment stability and colour. ARW gave milk an attractive purple hue. Monomeric **anthocyanin** degradation in skimmed and whole milk followed zero-order kinetics, with half lives of 173, 223 and 44 minutes at 70 C, and could be used as a natural colorant within a range of pH values. Matrix constituents showed a protective effect on **anthocyanin** stability, although interactions might occur in biological systems where pH values are near neutral.

L23 ANSWER 17 OF 60 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 3

ACCESSION NUMBER: 2006:18718 BIOSIS Full-text
DOCUMENT NUMBER: PREV200600020600
TITLE: Red clover **isoflavonoids** as **anthocyanin** color enhancing agents in muscadine wine and juice.
AUTHOR(S): Talcott, Stephen T. [Reprint Author]; Peele, Janelle E.; Brenes, Carmen H.
CORPORATE SOURCE: Univ Florida, Inst Food and Agr Sci, Dept Food Sci and Human Nutr, PO 110370, Gainesville, FL 32611 USA sttalcott@mail.ifas.ufl.edu
SOURCE: Food Research International, (2005) Vol. 38, No. 10, pp. 1205-1212.
CODEN: FORIEU. ISSN: 0963-9969.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 21 Dec 2005
Last Updated on STN: 21 Dec 2005

AB Isoflavonoid extracts from red clover (Trifolium pratense)leaves were found to enhance overall color and stability of **anthocyanin** 3,5-diglucosides present in muscadine grape (Vitis rotundifolia) juice and wine through intermolecular copigmentation reactions. Predominant **isoflavonoids** present in red clover included formononetin, biochanin A, and prunetin and were the major polyphenolics **identified** to influence **anthocyanin** color and stability. Since red clover **isoflavonoids** have poor **water solubility** characteristics, this allowed for removal of extraneous non-isoflavonoid compounds using hot **water** and subsequent extraction with ethanol. Isoflavonoid **solubility** was evaluated as a function of ethanol concentration with recoveries up to 57% found in 20% solutions. Changes in maximum absorbance, total soluble phenolics, **isoflavonoids**, and **anthocyanins** were evaluated in muscadine juice and wine following the addition of isoflavonoid extracts with maximum color enhancement found at an **anthocyanin** to cofactor ratio of 1:8, after which their **solubility** was prohibitive. Additionally, dried leaves and ethanolic extracts of red clover were added prior to and following fermentation of muscadine wine (11% ethanol) stimulating the natural copigmentation that takes place during red wine fermentation and aging processes. Once fermentation was complete, finished wines were evaluated over a 9-week storage period at 20 and 37 degrees C. Despite low levels of **isoflavonoids** present, color improvement and **anthocyanin** stability was observed in the wines during storage. Little information is available on copigmentation. reactions occurring in actual **food** systems, yet red clover **isoflavonoids** proved to be novel and effective color enhancing compounds when used in low concentrations in young muscadine wines. (c) 2005 Published by Elsevier Ltd.

L23 ANSWER 18 OF 60 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 2006:103141 CABA Full-text
DOCUMENT NUMBER: 20063081279
TITLE: Removal of red blush and bitterness from white wine by partial hyperoxidation of juice from the pink-skinned koshu variety
AUTHOR: Yokotsuka, K.; Ueno, N.; Singleton, V. L.
CORPORATE SOURCE: Interdisciplinary Graduate School of Medicine and Engineering, Institute of Enology and Viticulture, University of Yamanashi, Kofu, Yamanashi 400-0005, Japan. yokotsuk@yamanashi.ac.jp
SOURCE: Journal of Wine Research, (2005) Vol. 16, No. 3, pp. 233-248. 22 ref.
Publisher: Routledge. Basingstoke
ISSN: 0957-1264
URL: http://taylorandfrancis.metapress.com/link.asp?id=105425
DOI: 10.1080/09571260500327697
PUB. COUNTRY: United Kingdom
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Jun 2006
Last Updated on STN: 2 Jun 2006

AB White wine which is produced using sulfited juice from koshu grapes, the most important cultivar native to Japan, sometimes has bitterness and/or astringency and a red blush. In this study, the causes of bitterness and/or astringency and red blush in white wine produced from koshu grapes were determined, and their removal from the white wine was demonstrated. Koshu grapes harvested during September-October 1995 at the vineyard of the Institute of Enology and Viticulture, University of Yamanashi, Kofu, Japan, were used. The results showed that the bitterness and/or astringency of white wine made from sulfited juice was due to the oligomeric and polymeric tannins extracted from the skin and perhaps from the seed of soft koshu grape berries during crushing, stemming and pressing; whereas the red blush was probably due to excess caffeic acid derivatives, **anthocyanins** or **anthocyanin**-flavonoid complexes, and cyanidins produced from procyanidins. Partial hyperoxidation removed the phenols responsible for the bitterness and/or astringency, and the red blush via enzymatic oxidation (uninhibited by SO2), polymerization and **insolubilization**.

L23 ANSWER 19 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-689806 [67] WPIDS
CROSS REFERENCE: 2007-439456
DOC. NO. CPI: C2004-244433 [67]
TITLE: Composition useful as a hydrating **beverage**, comprises complex carbohydrate, chelated electrolyte, betaine, and piperine
DERWENT CLASS: D13; D16
INVENTOR: RIFKIN C; RIFKIN C H
PATENT ASSIGNEE: (BREA-N) BREAKTHRU PROD LLC; (RIFK-I) RIFKIN C
COUNTRY COUNT: 106

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20040191388	A1	20040930	(200467)*	EN	13[0]	
WO 2004089110	A2	20041021	(200469)	EN		
US 7160565	B2	20070109	(200705)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20040191388 A1		US 2003-403429	20030331
WO 2004089110 A2		WO 2004-US10040	20040331

PRIORITY APPLN. INFO: US 2003-403429 20030331
AN 2004-689806 [67] WPIDS
CR 2007-439456
AB US 20040191388 A1 UPAB: 20060122
NOVELTY - A composition (c1) comprises at least one complex carbohydrate, at least one chelated electrolyte, betaine, and piperine.
DETAILED DESCRIPTION - An **INDEPENDENT** CLAIM is included for the preparation of a liquid composition involving mixing the components of (c1), the resulting mixture is dissolved in a quantity of liquid to provide a solution where the components of (c1) are dissolved to provide a liquid composition ready for consumption by **drinking**. ACTIVITY - Muscular-Gen.; Immunomodulator; Antipyretic; Antidiarrheic; Antiemetic; Gastrointestinal-Gen.; Cardiovascular-Gen.; Cytostatic.
MECHANISM OF ACTION - None given.
USE - As a hydrating **beverage** (preferably in carbonated form) e.g. as a rehydration **drink**, for reducing at least one symptoms of dehydration of a human body (claimed). Also for the rehydration of animals including human beings at rest, during exercise, and after exercise/dehydration; and for preventing dehydration, loss of electrolytes, and nutrient minerals during periods of activity.
ADVANTAGE - The composition enhances hydration, preferably with enhanced absorption after ingestion while at the same time attenuating muscle fatigue and destroying harmful free radicals; improves digestion of carbohydrates and enhances enzymatic carbohydrase activity; and replaces **water** and carbohydrates lost by perspiration and prevents a decrease in the glucose content of blood during periods of heavy muscle work. The composition is ideally suited to anyone exposed to above-normal heat or hydration stress, such as those living in hot or humid climates, factory workers, armed forces personnel, police, firemen, airline workers and passengers, in addition to those who engage in exercise. The composition provides relief in conditions of sweating due to environmental heat and/or sunshine, when profuse sweating may be induced without significant physical exercise. The intake of the composition will help to prevent negative consequences of heat-induced ion disturbances, without affecting the **physiological** thirst mechanism, and will assist in protecting from environmental heat-induced systemic effects (e.g. fatigue, exhaustion, muscle cramps). The composition is beneficial for patients who exhibit dehydration symptoms including patients suffering from fever, severe diarrhea or vomiting, gastrointestinal disorders, cardiovascular disorders, xerostomia and chronic illness (such as cancer).

L23 ANSWER 20 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-523070 [49] WPIDS
DOC. NO. CPI: C2003-140667 [49]
TITLE: Non-therapeutic use of beta-glucuronidase inhibitor, e.g. isopulegol in **cosmetic deodorant** or antiperspirant compositions, for reducing body odor caused by hydrolytic decomposition of steroid esters.
DERWENT CLASS: B05; D21
INVENTOR: BANOWSKI B; GERKE T; HOFFMANN D; SAETTLER A; SATTLER A; SIEGERT P; WADLE A
PATENT ASSIGNEE: (BANO-I) BANOWSKI B; (GERK-I) GERKE T; (HENK-C) HENKEL KGAA; (HOFF-I) HOFFMANN D; (SAET-I) SAETTLER A; (SIEG-I)

SIEGERT P; (WADL-I) WADLE A
COUNTRY COUNT: 42

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2003039505	A2	20030515	(200349)*	DE	48[0]	
DE 10154368	A1	20030515	(200349)	DE		
EP 1441691	A2	20040804	(200451)	DE		
AU 2002357472	A1	20030519	(200464)	EN		
US 20040234466	A1	20041125	(200478)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003039505	A2	WO 2002-EP11981	20021026
DE 10154368	A1	DE 2001-10154368	20011106
AU 2002357472	A1	AU 2002-357472	20021026
EP 1441691	A2	EP 2002-802630	20021026
EP 1441691	A2	WO 2002-EP11981	20021026
US 20040234466	A1 Cont of	WO 2002-EP11981	20021026
US 20040234466	A1	US 2004-838930	20040504

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1441691 A2	Based on	WO 2003039505 A
AU 2002357472 A1	Based on	WO 2003039505 A

PRIORITY APPLN. INFO: DE 2001-10154368 20011106
AN 2003-523070 [49] WPIDS
AB WO 2003039505 A2 UPAB: 20060119
NOVELTY - Non-therapeutic use of beta-glucuronidase inhibitor(s) (I) in **cosmetic deodorant** or antiperspirant compositions for reducing body odor caused by the hydrolytic decomposition of steroid esters.
DETAILED DESCRIPTION - Non-therapeutic use of beta-glucuronidase inhibitor(s) (I) in **cosmetic deodorant** or antiperspirant compositions for reducing body odor caused by the hydrolytic decomposition of steroid esters. (I) is selected from:
(1) 2-6C monobasic mono-alpha-hydroxycarboxylic acids and their salts;
(2) 4-8C monobasic polyhydroxycarboxylic acids (containing 3-7 OH groups) and their intramolecular condensation products, ethers with mono-, oligo- or polysaccharides, esters with (in)organic acids and salts; (3) 3-8C non-hydroxylated polybasic carboxylic acids (containing 2 or 3 COOH groups) and their esters with optionally alkylated mono- or oligosaccharides and salts;
(4) 4-8C polybasic monohydroxycarboxylic acids (containing 2 or 3 COOH groups) and their esters with optionally alkylated mono- or oligosaccharides and salts;
(5) 4-8C polybasic polyhydroxycarboxylic acids (containing 2-6 OH groups and 2 or 3 COOH groups) and their esters with optionally alkylated mono- or oligosaccharides and salts; (6) 6-20C **aromatic** carboxylic acids (containing 1 or 2 phenyl residues, 1-6 OH groups and one COOH group) and their salts; (7) amino acids and their salts; (8) 6,7-disubstituted 2,2-dialkyl-chromanes or -chromenes; (9) phenolic glycosides having at least one phenoxy residue para-substituted by 1-3C alkoxy, vinyl, methylvinyl, 1- or 2-propenyl, isobutenyl, 1-3C alkyl, n-butyl, isobutyl, tert. butyl, ketopropyl, beta- or gamma-ketobutyl or beta-, gamma- or delta-ketopentyl; (10) extracts of: green tea

(Camellia sinensis), mate (Ilex paraguayensis) or Japanese tea (Camellia japanesis); fan palm (Saw palmetto), sage palm (Serenoa repens) or olive tree (Olea europaea) berries; Gingko biloba leaves; apple pips; pine (Pinus pinaster) bark; rosemary, Bacopa monniera, Willowherb, hyssop or cloves; blue algae (Spirulina platensis; magnesium enriched); or yeast; (11) **flavonoids, isoflavonoids** or polyphenols; (12) 6-12C monocyclic hydrocarbons containing 1 or 2 OH groups and one O as sole heteroatom (where the ring has 6 or 7 atoms and is saturated, unsaturated or **aromatic**); (13) hydroxyethane-1,1-diphosphonic acid, diethylene triamine penta-(methylenephosphonic acid), phytic acid or phosphonomethylated chitosan (or their alkali metal salts);
(14) zinc ricinoleate;
(15) geraniol-7 EO; and
(16) soluble inorganic copper(II), zinc or magnesium salts. ACTIVITY - Antiperspirant.
MECHANISM OF ACTION - beta-Glucuronidase Inhibitor.
USE - (I) are used for reducing body odor caused by the hydrolytic decomposition of steroid esters (claimed).
ADVANTAGE - (I) are well tolerated by skin; and often effective at low, non-bacteriostatic concentrations which do not adversely effect the natural microflora of the skin. The varying nature of compounds (I) allows great flexibility in choice of formulations.

L23 ANSWER 21 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-268023 [26] WPIDS
CROSS REFERENCE: 2003-755403
DOC. NO. CPI: C2003-069877 [26]
TITLE: Isolation of phenolic compounds, isoflavonones, from plant extracts used to treat menopausal symptoms, to prevent breast and prostate cancer and lower serum cholesterol levels.
DERWENT CLASS: B02
INVENTOR: HILBERT B H; KHARE A B
PATENT ASSIGNEE: (CRGI-C) CARGILL INC
COUNTRY COUNT: 99

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2003010116	A2	20030206	(200326)*	EN	17[0]	
EP 1420779	A2	20040526	(200435)	EN		
AU 2002313702	A1	20030217	(200452)	EN		
JP 2005504746	W	20050217	(200513)	JA	58	
CN 1556699	A	20041222	(200522)	ZH		
AU 2002313702	A8	20051013	(200611)	EN		
US 7015339	B2	20060321	(200621)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003010116	A2	WO 2002-US23555	20020723
AU 2002313702	A1	AU 2002-313702	20020723
AU 2002313702	A8	AU 2002-313702	20020723
CN 1556699	A	CN 2002-818486	20020723
EP 1420779	A2	EP 2002-753411	20020723
EP 1420779	A2	WO 2002-US23555	20020723
JP 2005504746	W	WO 2002-US23555	20020723
JP 2005504746	W	JP 2003-515479	20020723

US 7015339 B2 Provisional US 2001-307530P 20010724
US 7015339 B2 US 2002-201191 20020723

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1420779 A2	Based on	WO 2003010116 A
AU 2002313702 A1	Based on	WO 2003010116 A
JP 2005504746 W	Based on	WO 2003010116 A
AU 2002313702 A8	Based on	WO 2003010116 A

PRIORITY APPLN. INFO: US 2001-307530P 20010724
US 2002-201191 20020723
AN 2003-268023 [26] WPIDS
CR 2003-755403
AB WO 2003010116 A2 UPAB: 20060119
NOVELTY - A **method** of isolating phenolic compounds from plant extracts comprises providing an aqueous plant extract, comprising a plurality of phenolic compounds, at pH greater than 10; washing the extract with an organic solvent; adjusting the pH to less than 9; and isolating the phenolic compounds from the aqueous plant extract.
DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for:
(1) isolation of phenolic compounds which comprises: (a) providing an aqueous plant extract, comprising a plurality of phenolic compounds, at pH greater than 10; (b) extracting the aqueous plant extract with a first organic solvent to yield a first organic extract; (c) extracting the first organic extract with an aqueous phase of pH greater than 10 to yield a phenol rich aqueous phase; (d) adjusting the pH of the phenol rich aqueous phase to less than 9; and
(e) isolating the phenolic compounds from the phenol rich aqueous phase;
(2) a composition comprising: (a) 2 or more isoflavones wherein the isoflavones represent more then 15 % by weight of the composition; and (b) the composition exhibits about 80 % or more **solubility** in a mixture comprising about 0.03 % by weight of the composition in **water**.
USE - Isoflavones have a beneficial effect on the symptoms experienced by menopausal and peri-menopausal women, they may also retard certain cancers e.g. breast and prostate and have a serum-cholesterol lowering effect.

L23 ANSWER 22 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-755403 [71] WPIDS
CROSS REFERENCE: 2003-268023
DOC. NO. CPI: C2003-207305 [71]
TITLE: Isolating phenolic compounds for, e.g. preventing cancers, by providing plant extract at high pH, washing extract with organic solvent, adjusting extract pH, and isolating phenolic compounds from extract
DERWENT CLASS: E13
INVENTOR: HILBERT B H; KHARE A B
PATENT ASSIGNEE: (HILB-I) HILBERT B H; (KHAR-I) KHARE A B
COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20030139610	A1	20030724	(200371)*	EN	13[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20030139610	A1 Provisional	US 2001-307520P	20010724
US 20030139610	A1	US 2002-201191	20020723

PRIORITY APPLN. INFO: US 2002-201191 20020723
US 2001-307520P 20010724
AN 2003-755403 [71] WPIDS
CR 2003-268023
AB US 20030139610 A1 UPAB: 20050601
NOVELTY - Isolating phenolic compounds comprises providing aqueous plant extract containing phenolic compounds at pH greater than 10, washing the aqueous plant extract with organic solvent, adjusting pH of aqueous plant extract to pH less than 9, and isolating phenolic compounds from the aqueous plant extract.
DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for:
(1) a phenolic composition comprising at least two isoflavones (greater than 15 weight%). The composition exhibits at least 80% **solubility** in a mixture containing the composition (0.03 weight%) in **water**;
(2) a **method** of isolating phenolic compounds.
USE - For isolating phenolic compounds used for preventing certain cancers, e.g. breast or prostate cancers, and for providing serum cholesterol-lowering effects.
ADVANTAGE - The invention provides isoflavones from plant material with improved purity, color, flavor, **solubility**, and shelf stability.

L23 ANSWER 23 OF 60 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2003506894 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 14582991
TITLE: Antioxidant and antiproliferative activities of strawberries.
AUTHOR: Meyers Katherine J; Watkins Christopher B; Pritts Marvin P; Liu Rui Hai
CORPORATE SOURCE: Department of Food Science, Cornell University, Ithaca, New York 14853-7201, USA.
SOURCE: Journal of agricultural and food chemistry, (2003 Nov 5) Vol. 51, No. 23, pp. 6887-92.
Journal code: 0374755. ISSN: 0021-8561.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200401
ENTRY DATE: Entered STN: 30 Oct 2003
Last Updated on STN: 7 Jan 2004
Entered Medline: 6 Jan 2004
AB Strawberries contain high levels of antioxidants, which have been correlated with a decreased risk of chronic disease. To more fully characterize the antioxidant profiles and possible associated health benefits of this fruit, the total free and bound phenolic, total flavonoid, and total **anthocyanin** contents of eight strawberry cultivars (Earliglow, Annapolis, Evangeline, Allstar, Sable, Sparkle, Jewel, and Mesabi) were measured. Cultivar effects on phenolic contents were compared with antioxidant capacities, as measured by the total oxyradical scavenging capacity (TOSC) assay, and to antiproliferative activities, as measured by inhibition of HepG(2) human liver cancer cell proliferation in vitro. Free phenolic contents differed by 65% between the highest (Earliglow) and the lowest (Allstar) ranked cultivars. The **water** soluble bound and ethyl acetate soluble bound phenolic contents

averaged 5% of the total phenolic content of the cultivars. The total flavonoid content of Annapolis was 2-fold higher than that of Allstar, which had the lowest content. The **anthocyanin** content of the highest ranked cultivar, Evangeline, was more than double that of the lowest ranked cultivar, Allstar. Overall, free phenolic content was weakly correlated with total antioxidant activity, and flavonoid and **anthocyanin** content did not correlate with total antioxidant activity. The proliferation of HepG(2) human liver cancer cells was significantly inhibited in a dose-**dependent** manner after exposure to all strawberry cultivar extracts, with Earliglow exhibiting the highest antiproliferative activity and Annapolis exhibiting the lowest. No relationship was found between antiproliferative activity and antioxidant content.

L23 ANSWER 24 OF 60 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2003202275 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12720386
TITLE: Influence of industrial processing on orange juice **flavanone solubility** and transformation to **chalcones** under gastrointestinal conditions.
AUTHOR: Gil-Izquierdo Angel; Gil Maria Isabel; Tomas-Barberan Francisco Abraham; Ferreres Federico
CORPORATE SOURCE: Research Group on Quality, Safety and Bioactivity of Plant Foods, Departamento Ciencia y Tecnologia de Alimentos, CEBAS-CSIC, P.O. Box 4195, 30080 Murcia, Spain.
SOURCE: Journal of agricultural and food chemistry, (2003 May 7) Vol. 51, No. 10, pp. 3024-8.
Journal code: 0374755. ISSN: 0021-8561.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200306
ENTRY DATE: Entered STN: 1 May 2003
Last Updated on STN: 17 Jun 2003
Entered Medline: 16 Jun 2003

AB Orange juice manufactured at industrial scale was subjected to digestion under in vitro gastrointestinal conditions (pH, temperature, and enzyme and chemical conditions) to evaluate the influence of individual industrial processing treatments on **flavanone solubility** , stability, and ability to permeate through a membrane under simulated **physiological** conditions. Four industrial processes including squeezing, standard pasteurization, concentration, and freezing were evaluated. Hand squeezing was compared with industrial squeezing. After in vitro gastrointestinal digestion of the orange juices, the **flavanones** able to permeate through a dialysis membrane, and those remaining in the retentate were evaluated by HPLC as were those present in the insoluble fraction. In all of the assayed orange juices, a high content of precipitated **chalcones** (approximately 70% of the total **flavanones**) was formed under the **physiological** conditions of the gastrointestinal tract. Hand squeezing provided a higher concentration of **flavanones** in the permeated fraction and lower transformation to **chalcones** than industrial squeezing. Standard pasteurization did not influence the **solubility** and permeability of the orange juice **flavanones** and **chalcones**. Industrial concentration did not affect the amount of **flavanones** able to permeate but decreased the **chalcones** produced. Juices produced from frozen orange juice contained considerably smaller amounts of both soluble **flavanones** and insoluble **chalcones**.

L23 ANSWER 25 OF 60 EMBASE

reserved on STN
ACCESSION NUMBER: 2004539070 EMBASE Full-text
TITLE: Inhibition of Syk activity and degranulation of human mast cells by **flavonoids**.
AUTHOR: Shichijo M.; Yamamoto N.; Tsujishita H.; Kimata M.; Nagai H.; Kokubo T.
CORPORATE SOURCE: M. Shichijo, Research Center Kyoto, Bayer Yakuhin, Ltd., 6-5-1-3 Kunimidai, Kizu-cho, Soraku-gun, Kyoto 619-0216, Japan. michitaka_shichijo.ms@bayer.co.jp
SOURCE: Biological and Pharmaceutical Bulletin, (Dec 2003) Vol. 26, No. 12, pp. 1685-1690.
Refs: 20
ISSN: 0918-6158 CODEN: BPBLEO
COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 030 Clinical and Experimental Pharmacology
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 6 Jan 2005
Last Updated on STN: 6 Jan 2005

AB To investigate the effect of **flavonoids** on the activation of p72 (syk) (Syk) protein tyrosine kinase which plays a pivotal role in the high affinity IgE receptor-mediated degranulation of mast cells, we picked out 10 **flavonoids**, classified them into 4 series, and examined their effects on the activation of Syk and on the degranulation of human mast cells. Flavones and flavonols showed clear inhibition, whereas **flavanones** and isoflavones had either weak or no effect on Syk enzymatic activity induced by amino acid pepride corresponding to the activation loop domain and on IgE-**dependent** degranulation of human cultured mast cells (HCMC). On the basis of calculated logP (ClogP) values as a prediction of compound lipophilicity, some **flavonoids** were speculated to have low lipophilicity, the reason for poor cell permeability. A significant relationship was observed between the inhibition of Syk activity and HCMC degranulation attributable to **flavonoids** when the ClogP values of the compounds were taken into account (r(2)=0.89). These results suggested that the impairment of mast cell degranulation by several **flavonoids** classified into flavones and flavonols might be mediated via inhibition of the intracellular activation of Syk.

L23 ANSWER 26 OF 60 MEDLINE on STN
ACCESSION NUMBER: 2003292547 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12820232
TITLE: Main **flavonoids** in the root of Scutellaria baicalensis cultivated in Europe and their comparative antiradical properties.
AUTHOR: Bochorakova Hana; Paulova Hana; Slanina Jiri; Musil Pavel; Taborska Eva
CORPORATE SOURCE: Department of Biochemistry, Faculty of Medicine, Masaryk University in Brno, Brno, Czech Republic.
SOURCE: Phytotherapy research : PTR, (2003 Jun) Vol. 17, No. 6, pp. 640-4.
Journal code: 8904486. ISSN: 0951-418X.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200309

ENTRY DATE: Entered STN: 24 Jun 2003
Last Updated on STN: 13 Sep 2003
Entered Medline: 12 Sep 2003

AB The content of the main **flavonoids** in the root of Scutellaria baicalensis Georgi cultivated in Central Europe was evaluated using the new simple RP-HPLC **method** with gradient of acetonitrile in mobile phase. The main components of the roots were baicalin (8.12% of dry root mass) and wogonin glucuronide (2.52%). The content of **flavonoids** was comparable with the content in plants cultivated in natural localities. Five main **flavonoids** were evaluated for their scavenging ability with DPPH radical-generating system and due to limited **solubility** only two **flavonoids** were investigated for their ability to scavenge hydroxyl radical by the **aromatic** hydroxylation **method**. The total extract was also tested in both the experimental arrangements. In experiments with DPPH, only baicalin and baicalein displayed a significant scavenging effect, while the production of OH radicals generated by UV photolysis of H(2)O(2) was considerable decreased in the presence of baicalin and wogonin glucuronide. After comparison with results obtained for the total extract, it was concluded, that the scavenging activity of the extract against DPPH is mainly derived from baicalin. On the other hand, baicalin, wogonin glucuronide and probably other **flavonoids** participate in scavenging OH radical. Copyright 2003 John Wiley & Sons, Ltd.

L23 ANSWER 27 OF 60 MEDLINE on STN
ACCESSION NUMBER: 2003399040 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12937967
TITLE: Natural products as antiparasitic drugs.
AUTHOR: Kayser O; Kiderlen A F; Croft S L
CORPORATE SOURCE: Freie Universitat Berlin, Institut fur Pharmazie, Pharmazeutische Biotechnologie, Kelchstrasse 31, 12169 Berlin, Germany.. kayser@zedat.fu-berlin.de
SOURCE: Parasitology research, (2003 Jun) Vol. 90 Suppl 2, pp. S55-62. Electronic Publication: 2003-02-20. Ref: 58
Journal code: 8703571. ISSN: 0932-0113.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200312
ENTRY DATE: Entered STN: 26 Aug 2003
Last Updated on STN: 18 Dec 2003
Entered Medline: 11 Dec 2003

AB Natural products are not only the basis for traditional or ethnic **medicine**. Only recently, they have provided highly successful new drugs such as Artemisinin. Furthermore, screening natural products found in all sorts of environments such as the deep sea, rain forests and hot springs, and produced by all sorts of organisms ranging from bacteria, fungi and plants to protozoa, sponges and invertebrates, is a highly competitive field where all of the major pharmaceutical companies are encountered. Already, many new natural product groups have revealed antiparasitic properties of surprising efficacy and selectivity, as will be shown in this review for plant-derived alkaloids, terpenes and phenolics. Many novel lead structures, however, have severe chemico-physical drawbacks such as poor **solubility**. Here, innovative drug formulations and carrier systems might help, as discussed by the authors in another article of this series.

L23 ANSWER 28 OF 60 MEDLINE on STN
ACCESSION NUMBER: 2002413198 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 12166959
TITLE: Studies of the constituents of Uruguayan propolis.
AUTHOR: Kumazawa Shigenori; Hayashi Katsumi; Kajiya Katsuko; Ishii Takeshi; Hamasaka Tomoko; Nakayama Tsutomu
CORPORATE SOURCE: School of Food and Nutritional Sciences, University of Shizuoka, 52-1 Yada, Shizuoka 422-8526, Japan.. kumazawa@smail.u-shizuoka-ken.ac.jp
SOURCE: Journal of agricultural and food chemistry, (2002 Aug 14) Vol. 50, No. 17, pp. 4777-82.
Journal code: 0374755. ISSN: 0021-8561.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200209
ENTRY DATE: Entered STN: 9 Aug 2002
Last Updated on STN: 19 Sep 2002
Entered Medline: 18 Sep 2002

AB Eighteen **flavonoids** including two new compounds, four **aromatic** carboxylic acids, and eleven phenolic acid esters including one new compound were isolated and **identified** from the ethyl acetate soluble fraction of the 70% ethanol extract of Uruguayan propolis. The new compounds were elucidated as pinobanksin 3-(2-methyl)butyrate (1; recently reported in Usia, T.; Banskota, A. H.; Tezuka, Y.; Midorikawa, K.; Matsushige, K.; Kadota, S. J. Nat. Prod. 2002, 65, 673-676) pinobanksin 3-isobutyrate (2), and 2-methyl-2-butenyl ferulate (24). The constituents isolated from Uruguayan propolis in this study were similar to those of propolis of European and Chinese origin. Thus, it is suggested that the Uruguayan propolis has a plant origin similar to those of propolis from Europe and China.

L23 ANSWER 29 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 594787 FROSTI Full-text
TITLE: Strategy of preparative separation of organic compounds by thin-layer chromatographic **methods**.
AUTHOR: Waksmundzka-Hajnos M.; Wawrzynowicz T.
SOURCE: Journal of Liquid Chromatography and Related Technologies, 2002, 25 (13-15), 2351-2386 (155 ref.)
Published by: Marcel Dekker Inc. Address: PO Box 5005, 185 Cimarron Road, Monticello, NY 12701-5185, USA. Fax: +1 (914) 796 1772. journals@dekker.com
Web: www.dekker.com
ISSN: 1082-6076
DOCUMENT TYPE: Journal
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Preparative thin-layer chromatography may be used for isolation of one or more sample components for further **identification**, investigation of biological activity, and possible online and offline detection. This review discusses optimization of the technique; **methods** and modes of mobile phase flow; sampling procedures; adsorbents, sample **solubility** and solvents; detection; gradient elution; and two-dimensional micropreparative separation. The technique is applicable to separation of alkaloids, phenolic compounds, **flavonoids**, **isoflavonoids**, coumarins, **anthocyanins**, terpenes, terpenoids, sesquiterpenes, saponins, sterols, lipids, fatty acids, gangliosides, carotenoids and other specified organic compounds in plant extracts.

L23 ANSWER 30 OF 60 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2002234683 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 11959560
TITLE: Effects of compounds found in propolis on Streptococcus mutans growth and on glucosyltransferase activity.
AUTHOR: Koo Hyun; Rosalen Pedro L; Cury Jaime A; Park Yong K; Bowen William H
CORPORATE SOURCE: Center for Oral Biology and Eastman Department of Dentistry, University of Rochester Medical Center, Rochester, New York 14642, USA..
Hyun_Koo@urmc.rochester.edu
CONTRACT NUMBER: DE09707 (NIDCR)
SOURCE: Antimicrobial agents and chemotherapy, (2002 May) Vol. 46, No. 5, pp. 1302-9.
Journal code: 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200208
ENTRY DATE: Entered STN: 26 Apr 2002
Last Updated on STN: 7 Aug 2002
Entered Medline: 6 Aug 2002

AB Propolis, a resinous bee product, has been shown to inhibit the growth of oral microorganisms and the activity of bacterium-derived glucosyltransferases (GTFs). Several compounds, mainly polyphenolics, have been **identified** in this natural product. The present study evaluated the effects of distinct chemical groups found in propolis on the activity of GTF enzymes in solution and on the surface of saliva-coated hydroxyapatite (sHA) beads. Thirty compounds, including **flavonoids**, cinnamic acid derivatives, and terpenoids, were tested for the ability to inhibit GTFs B, C, and D from Streptococcus mutans and GTF from S. sanguinis (GTF Ss). Flavones and flavonols were potent inhibitors of GTF activity in solution; lesser effects were noted on **insolubilized** enzymes. Apigenin, a 4',5,7-trihydroxyflavone, was the most effective inhibitor of GTFs, both in solution (90.5 to 95% inhibition at a concentration of 135 microg/ml) and on the surface of sHA beads (30 to 60% at 135 microg/ml). Antibacterial activity was determined by using MICs, minimum bactericidal concentrations (MBCs), and time-kill studies. **Flavanones** and some dihydroflavonols, as well as the sesquiterpene tt-farnesol, inhibited the growth of S. mutans and S. sobrinus; tt-farnesol was the most effective antibacterial compound (MICs of 14 to 28 microg/ml and MBCs of 56 to 112 microg/ml). tt-Farnesol (56 to 112 microg/ml) produced a 3-log-fold reduction in the bacterial population after 4 h of incubation. Cinnamic acid derivatives had negligible biological activities. Several of the compounds **identified** in propolis inhibit GTF activities and bacterial growth. Apigenin is a novel and potent inhibitor of GTF activity, and tt-farnesol was found to be an effective antibacterial agent.

L23 ANSWER 31 OF 60 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2002232976 EMBASE Full-text
TITLE: Cytotoxic **flavonoids** from the stem bark of Lonchocarpus aff. fluvialis.
AUTHOR: Blatt C.T.T.; Chavez D.; Chai H.; Graham J.G.; Cabieses F.; Farnsworth N.R.; Cordell G.A.; Pezzuto J.M.; Kinghorn A.D.
CORPORATE SOURCE: A.D. Kinghorn, Dept. of Med. Chem. and Pharmacogn., College of Pharmacy, M/C 781, 833 S. Wood St., Chicago, IL 60612,

United States. kinghorn@uic.edu
SOURCE: Phytotherapy Research, (2002) Vol. 16, No. 4, pp. 320-325.
Refs: 50
ISSN: 0951-418X CODEN: PHYREH
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 18 Jul 2002
Last Updated on STN: 18 Jul 2002

AB Activity-guided fractionation of a chloroform-soluble extract of Lonchocarpus aff. fluvialis stem bark using a human epidermoid (KB) tumour cell line as a monitor afforded five rotenoids, one pterocarpan, one **chalcone**, three **flavanones**, one flavone and one triterpenoid. All of the compounds isolated proved to be of previously known structure. Among them, the rotenoids (-)-sumatrol and (±)-villosinol, the dibenzoylmethane derivative (+)-3,4-methylenedioxy- 2'-methoxy-[2",3":4',3']-fu ranodibenzoylmethane, and the **flavanones** (-)-isoglabrachromene and (-)-candidone have been shown to exhibit significant cytotoxic activity against human cancer cells for the first time. This is the first report of the chemical constituents of this species, and the profile of compounds obtained was in accordance with the established chemosystematic patterns of species in the tribe Tephrosieae (Leguminosae, Papilionoideae). Copyright .COPYRGT. 2002 John Wiley & Sons, Ltd.

L23 ANSWER 32 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 591477 FROSTI Full-text
TITLE: **Food** colorants.
AUTHOR: Wilska-Jeszka J.
SOURCE: Chemical and functional properties of food components. (2nd edition), Published by: CRC Press, Boca Raton, 2002, 205-229 (15 ref.)
Sikorski Z.E.
ISBN: 1-58716-149-4
DOCUMENT TYPE: Book Article
LANGUAGE: English

AB Colour is an important quality attribute of unprocessed and manufactured **foods**. Colour is usually the result of the presence of natural pigments or added dyes. Natural pigments can be divided into five groups: carotenoids, chlorophylls and haemes, **anthocyanins**, miscellaneous (betalains, cochineal, riboflavin, curcumin), and melanoidins and caramels. The structure, occurrence, **food** colorant applications, physical and chemical properties and biological activity of the different pigments are reviewed. Synthetic **food** colorants can be divided into **water**-soluble, oil-soluble, insoluble and surface marking colours. The chemical structure, **solubility**, stability and applications of synthetic **food** colorants are described.

L23 ANSWER 33 OF 60 CABA COPYRIGHT 2007 CABI on STN
ACCESSION NUMBER: 2002:178509 CABA Full-text
DOCUMENT NUMBER: 20023080048
TITLE: Neohesperidin DC: a sweetener for the dairy industry
Neohesperidin DC: ein Sussstoff fur die Molkereiwirtschaft
AUTHOR: Muller, S. D.; Raschke, K.
CORPORATE SOURCE: Deutsches Institut fur Ernahrungsmedizin und Diatetik (DIET), Bad Aachen, Germany.

SOURCE: DMZ, Lebensmittelindustrie und Milchwirtschaft, (2002) Vol. 123, No. 10, pp. 46-48. Publisher: AVA Agrar-Verlag Allgau GmbH. Kempten ISSN: 1617-2795
PUB. COUNTRY: Germany, Federal Republic of
DOCUMENT TYPE: Journal
LANGUAGE: German
ENTRY DATE: Entered STN: 8 Nov 2002 Last Updated on STN: 8 Nov 2002

AB Neohesperidin **dihydrochalcone** (NHDC) is one of the six sweeteners approved for use as a **food** additive in the EU. It is made from a neohesperidin flavonoid, which occurs naturally in Seville oranges. An account is given of the manufacture, **solubility**, physical characters, stability, organoleptic traits, disposal in the human body, toxicology and permitted dosage of NHDC. It is concluded that NHDC is suitable for use in fresh and frozen desserts and in yoghurt.

L23 ANSWER 34 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-112499 [12] WPIDS
CROSS REFERENCE: 2001-091751
DOC. NO. CPI: C2001-033517 [12]
TITLE: **Method** for controlling the flux of penetrants across an adaptable semi-permeable barrier is useful for administering an agent to a mammalian body or a plant and for generating an immune response by vaccinating the mammal
DERWENT CLASS: A18; A28; A96; B05; B07; D16; D22; P34
INVENTOR: CEVC G; RICHARDSEN H; WEILAND-WAIBEL A; GEORGE C C; HOLGER R; WEI; WEILAND-WEIBEL A
PATENT ASSIGNEE: (CEVC-I) CEVC G; (IDEA-N) IDEA AG; (RICH-I) RICHARDSEN H; (WEIL-I) WEILAND-WAIBEL A; (IDEA-N) IDEA INNOVATIVE DERMALE APPLIKATIONEN GM
COUNTRY COUNT: 93

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2001001963	A1	20010111	(200112)*	EN	110[14]	
AU 2000061557	A	20010122	(200125)	EN		
BR 2000012178	A	20020312	(200226)	PT		
EP 1189598	A1	20020327	(200229)	EN		
CZ 2002000038	A3	20020515	(200241)	CS		
CN 1359288	A	20020717	(200268)	ZH		
HU 2002001454	A2	20021228	(200308)	HU		
JP 2003503442	W	20030128	(200309)	JA	109	
US 20030099694	A1	20030529	(200337)	EN		
AU 779765	B2	20050210	(200527)	EN		
US 20050123897	A1	20050609	(200538)	EN		
RU 2260445	C2	20050920	(200563)	RU		
IN 2001DN01133	P1	20050311	(200657)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001001963	A1	WO 2000-EP6367	20000705
AU 2000061557	A	AU 2000-61557	20000705
AU 779765	B2	AU 2000-61557	20000705

BR 2000012178 A	BR 2000-12178 20000705
CN 1359288 A	CN 2000-809916 20000705
EP 1189598 A1	EP 2000-947939 20000705
BR 2000012178 A	WO 2000-EP6367 20000705
EP 1189598 A1	WO 2000-EP6367 20000705
CZ 2002000038 A3	WO 2000-EP6367 20000705
HU 2002001454 A2	WO 2000-EP6367 20000705
JP 2003503442 W	WO 2000-EP6367 20000705
US 20030099694 A1 Cont of	WO 2000-EP6367 20000705
US 20050123897 A1 Cont of	WO 2000-EP6367 20000705
RU 2260445 C2	WO 2000-EP6367 20000705
JP 2003503442 W	JP 2001-507458 20000705
CZ 2002000038 A3	CZ 2002-38 20000705
HU 2002001454 A2	HU 2002-1454 20000705
RU 2260445 C2	RU 2002-101651 20000705
US 20030099694 A1	US 2002-37480 20020104
US 20050123897 A1 Cont of	US 2002-37480 20020104
US 20050123897 A1	US 2004-984450 20041108
IN 2001DN01133 P1	WO 2000-EP6367 20000705
IN 2001DN01133 P1	IN 2001-DN1133 20011206

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 779765 B2	Previous Publ	AU 2000061557 A
AU 2000061557 A	Based on	WO 2001001963 A
BR 2000012178 A	Based on	WO 2001001963 A
EP 1189598 A1	Based on	WO 2001001963 A
CZ 2002000038 A3	Based on	WO 2001001963 A
HU 2002001454 A2	Based on	WO 2001001963 A
JP 2003503442 W	Based on	WO 2001001963 A
AU 779765 B2	Based on	WO 2001001963 A
RU 2260445 C2	Based on	WO 2001001963 A

PRIORITY APPLN. INFO: WO 1999-EP4659 19990705
AN 2001-112499 [12] WPIDS
CR 2001-091751
AB WO 2001001963 A1 UPAB: 20060116
NOVELTY - A **method** for controlling the flux of penetrants across an adaptable semi-permeable porous barrier is new.
DETAILED DESCRIPTION - A **method** for controlling the flux of penetrants across an adaptable semi-permeable membrane comprises suspending the penetrants in a polar liquid in the form of fluid droplets surrounds by a membrane-like coating comprising at least two kinds of amphiphilic substances with a tendency to aggregate, selecting a dose of the penetrants to control the flux of the penetrants across the barrier and applying the selected dose of the formulation onto the area of the barrier. The amphiphilic substances differ by a factor of at least 10 in **solubility** in the polar liquid and the homo-aggregates of the more soluble substance and hetero-aggregates have a preferred average diameter smaller than the diameter of the homo-aggregates of the less soluble substance. The more soluble substance tends to **solubilize** the droplet and comprises up to 99% of the **solubilizing** concentration or saturating concentration in the unstabilized droplet. The presence of the more soluble substance lowers the average elastic energy of the coating by at least 5 times preferably more than 10 times the average elastic energy of red blood cells or of phospholipid bilayers with fluid aliphatic chains. The penetrants are able to transport agents through the pores of the barrier or enable agent permeation through the pores after the penetrants have entered the pores.
INDEPENDENT CLAIMS are included for: (i) a kit containing the formulation;

(ii) a patch containing the formulation; and (iii) a **method** of administering an agent to a mammalian body or plant comprising the novel **method**.
USE - The **method** is useful for administering an agent to a mammalian body or a plant, for generating an immune response by vaccinating the mammal and for treating inflammatory disease, dermatosis, kidney or liver failure, adrenal insufficiency, aspiration syndrome, Behcet syndrome, bites and stings, blood disorders (cold-hemagglutinin disease), hemolytic anaemia, hypereosinophilic, hypoplastic anaemia, macroglobulinaemia and thrombocytopenic purpura), bone disorders, cerebral oedema, Cogan's syndrome, congenital adrenal hyperplasia, connective tissue disorders (lichen, lupus erythematosus, polymyalgia rheumatica, polymyositis and dermatomyositis), epilepsy, eye disorders (cataracts), Graves' ophthalmopathy, hemangioma, herpes infections, neuropathies, retinal vasculitis, scleritis, gastro-intestinal disorders (inflammatory bowel disease, nausea and oesophageal damage), hypercalcaemia, infections, Kawasaki disease, myasthenia gravis, pain syndromes, polyneuropathies, pancreatitis, respiratory disorders (asthma), rheumatoid disease, osteoarthritis, rhinitis, sarcoidosis, skin diseases, alopecia, eczema, erythema multiforme, lichen, pemphigus and pemphigoid, psoriasis, pyoderma gangrenosum, urticaria and thyroid and vascular disorders.
ADVANTAGE - Increasing the applied dose above a threshold level affects both the drug/penetrant distribution and also determines the rate of penetrant transport across the barrier.

L23 ANSWER 35 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 565528 FROSTI Full-text
TITLE: Improvements in or relating to **solubilisation** of flavonols.
INVENTOR: Howard A.N.
SOURCE: PCT Patent Application
PATENT INFORMATION: WO 2001060179 A1 20010823
APPLICATION INFORMATION: 20010131
PRIORITY INFORMATION: United States 20000216
NOTE: 20010823
DOCUMENT TYPE: Patent
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A **method** is given for increasing the **solubility** in **water** of a flavonol component of a flavonol-containing composition by mixing with an **anthocyanin**-containing component. The presence of **anthocyanin** increases the **water solubility** and bioavailability of the flavonols, especially at neutral or acidic pH values. Flavonols have antioxidant properties and can decrease platelet stickiness and reduce the risk of coronary heart disease.

L23 ANSWER 36 OF 60 FSTA COPYRIGHT 2007 IFIS on STN
ACCESSION NUMBER: 2001(12):T1094 FSTA Full-text
TITLE: Isolation of natural pigments by high speed CCC.
AUTHOR: Degenhardt, A.; Winterhalter, P.
CORPORATE SOURCE: Inst. of Food Chem., Tech. Univ. of Braunschweig, D-38106 Braunschweig, Germany
SOURCE: Journal of Liquid Chromatography & Related Technologies, (2001) 24 (11/12) 1745-1764, 30 ref.
ISSN: 1082-6076
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Separation of many natural **food** colorants on a preparative scale remains problematic due to their high **water solubility** . Application of high-speed countercurrent chromatography (CCC) for separation of **anthocyanins** from red wine, betalains from red beet juice concentrate, carotenoids from a methanol

extract of Gardenia jasminoides fruits and theaflavic acids from a hot **water** extract of black tea is reported. High-speed countercurrent chromatography was also used to purify a crude carminic acid preparation by pH-zone refining, and to isolate hydrophilic thearubigins from black tea.

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ACCESSION NUMBER: 2002139322 EMBASE Full-text
TITLE: Inhibition of human CYP3A4 activity by grapefruit **flavonoids**, furanocoumarins and related compounds.
AUTHOR: Ho P.-C.; Saville D.J.; Wanwimolruk S.
CORPORATE SOURCE: S. Wanwimolruk, College of Pharmacy, Western Univ. of Health Sciences, 309 E. Second Street, Pomona, CA 91766-1854, United States. swanwimolruk@westernu.edu
SOURCE: Journal of Pharmacy and Pharmaceutical Sciences, (2001) Vol. 4, No. 3, pp. 217-227.
Refs: 48
ISSN: 1482-1826
COUNTRY: Canada
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical and Experimental Biochemistry
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: Sep 2007
Last Updated on STN: Sep 2007

AB Purpose. To evaluate the inhibition of CYP3A4 activity in human liver microsomes by **flavonoids**, furanocoumarins and related compounds and investigate possibly more important and potential inhibitors of CYP3A4 in grapefruit juice. **Methods**. The effects of various **flavonoids** and furanocoumarin derivatives on CYP3A4 activity in two human liver microsomal samples was determined using quinine as a substrate. All **flavonoids** and furanocoumarin derivatives were dissolved in DMSO. In all cases, inhibition activities were compared with activities in control incubations containing 0.2% (v/v) DMSO. Results. The results showed that the inhibition of quinine 3-hydroxylation (CYP3A4 activity) by bergapten (67%), and quercetin (55%) was greater than naringenin (39%) and naringin (6%), at the same inhibitor concentration of 100 M. The results also demonstrated that the furan ring in the furanocoumarins enhanced the inhibitory effect on CYP3A4 activity. **Flavonoids** with more phenolic hydroxyl (-OH) groups produced stronger inhibition than those with less hydroxyl groups. Of all the chemicals studied, bergapten (5-methoxypsoralen) with the lowest IC50 value (19-36 μM) was the most potent CYP3A4 inhibitor. Conclusions. These results suggest that more than one component present in grapefruit juice may contribute to the inhibitory effect on CYP3A4. Bergapten appears to be a potent inhibitor of CYP3A4, and may therefore be primarily responsible for the effect of grapefruit juice on CYP3A4 activity.

L23 ANSWER 38 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN

ACCESSION NUMBER: 1999-561849 [47] WPIDS
DOC. NO. CPI: C1999-163780 [47]
TITLE: Composition containing extract of Ginkgo biloba leaves obtained using an improved **method**, useful for treating e.g. heart diseases such as angina and palpitation, and for impotency and psoriasis
DERWENT CLASS: B04
INVENTOR: AN Z G; DE LONG X; GAO O; GAO Q; HUANG X; HUANG X S; JIN

X; JIN X W; NING W; PING S B; QI G; SHAO B; SHAO B P; SHENG H X; WANG N; WU J X; XIE D; XIE D L; ZHANG G; ZHANG G A

PATENT ASSIGNEE: (ANZG-I) AN Z G; (DLON-I) DE LONG X; (GAOQ-I) GAO Q; (HUAN-I) HUANG X S; (JINX-I) JIN X W; (NING-I) NING W; (PING-I) PING S B; (QIGG-I) QI G; (SHAN-N) SHANGHAI XINGLING SCI & TECH PHARM CO LT; (SHAO-I) SHAO B P; (SHEN-I) SHENG H X; (SICM-N) SICMM SHANGHAI INST CHINESE MATERIA MEDI; (WANG-I) WANG N; (WUJX-I) WU J X; (XIED-I) XIE D L; (XING-N) XINGLING SCI & TECH PHARM CO LTD SHANGHA; (XING-N) XINGLING SCI & TECHNOLOGY & PHARM IND C; (ZHAN-I) ZHANG G A

COUNTRY COUNT: 82

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 9947148	A1	19990923	(199947)*	ZH	46[0]	
AU 9928247	A	19991011	(200008)	EN		
US 6030621	A	20000229	(200018)	EN		
GB 2352177	A	20010124	(200107)	EN		
US 6187314	B1	20010213	(200111)	EN		
CN 1292704	A	20010425	(200143)	ZH		
AU 741628	B	20011206	(200206)	EN		
US 20010055629	A1	20011227	(200206)	EN		
US 6475534	B2	20021105	(200276)	EN		
GB 2352177	B	20030806	(200353)	EN		
US 20030152654	A1	20030814	(200355)	EN		
US 6632460	B2	20031014	(200368)	EN		
CN 1508542	A	20040630	(200462)	ZH		
CN 1159022	C	20040728	(200612)	ZH		
CN 1740786	A	20060301	(200655)	ZH		
CN 1740787	A	20060301	(200655)	ZH		
CN 1267727	C	20060802	(200682)	ZH		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9947148	A1	WO 1999-CN38	19990319
US 6030621	A	US 1998-44551	19980319
US 6187314	B1 Div Ex	US 1998-44551	19980319
US 20010055629	A1 Cont of	US 1998-44551	19980319
US 6475534	B2 Cont of	US 1998-44551	19980319
US 20030152654	A1 Cont of	US 1998-44551	19980319
US 6632460	B2 Cont of	US 1998-44551	19980319
US 6187314	B1	US 1998-97058	19980612
US 20010055629	A1 Cont of	US 1998-97058	19980612
US 6475534	B2 Cont of	US 1998-97058	19980612
US 20030152654	A1 Cont of	US 1998-97058	19980612
US 6632460	B2 Cont of	US 1998-97058	19980612
AU 9928247	A	AU 1999-28247	19990319
AU 741628	B	AU 1999-28247	19990319
CN 1292704	A	CN 1999-803683	19990319
CN 1508542	A Div Ex	CN 1999-803683	19990319
CN 1159022	C	CN 1999-803683	19990319
GB 2352177	A	WO 1999-CN38	19990319
GB 2352177	B	WO 1999-CN38	19990319
GB 2352177	A	GB 2000-24213	20001003

GB 2352177 B	GB 2000-24213 20001003
US 20010055629 A1	US 2001-768678 20010124
US 6475534 B2	US 2001-768678 20010124
US 20030152654 A1 Cont of	US 2001-768678 20010124
US 6632460 B2 Cont of	US 2001-768678 20010124
US 20030152654 A1	US 2002-268237 20021010
US 6632460 B2	US 2002-268237 20021010
CN 1508542 A	CN 2003-118517 19990319
CN 1740786 A	CN 2005-10105217 19990319
CN 1740787 A	CN 2005-10105218 19990319
CN 1267727 C	CN 2003-10118517 19990319

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 741628 B	Previous Publ	AU 9928247 A
US 6187314 B1	Div ex	US 6030621 A
US 20010055629 A1	Cont of	US 6030621 A
US 6475534 B2	Cont of	US 6030621 A
US 20030152654 A1	Cont of	US 6030621 A
US 6632460 B2	Cont of	US 6030621 A
US 20010055629 A1	Cont of	US 6187314 A
US 6475534 B2	Cont of	US 6187314 B
US 20030152654 A1	Cont of	US 6187314 B
US 6632460 B2	Cont of	US 6187314 B
US 20030152654 A1	Cont of	US 6475534 B
US 6632460 B2	Cont of	US 6475534 B
AU 9928247 A	Based on	WO 9947148 A
GB 2352177 A	Based on	WO 9947148 A
AU 741628 B	Based on	WO 9947148 A
GB 2352177 B	Based on	WO 9947148 A

PRIORITY APPLN. INFO: US 1998-44551 19980319
US 1998-97058 19980612
US 2001-768678 20010124
US 2002-268237 20021010

AN 1999-561849 [47] WPIDS

AB WO 1999047148 A1 UPAB: 20060115
NOVELTY - Composition comprises:
(a) 44-78% **flavonoids**;
(b) 2.5-10% ginkgolides A, B, C, J or their mixture; (c) 2.5-10% bilobalide; and
(d) 0.1-5 ppm ginkgolic acid.
DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for:
(i) drug compositions prepared using the above substances extracted from Ginkgo biloba leaves; and
(ii) a **method** for preparing the composition. ACTIVITY - Antianginal; antilipemic; vasotropic; antipsoriatic; nootropic; neuroprotective; antiarteriosclerotic; antiarthritic; antiasthmatic; cardiant; auditory; analgesic; hypotensive; antiparkinsonian; antirheumatic; tuberculostatic.
USE - Useful as a drug, additive to **food**, **drinks** and **cosmetics**, and for treating various types of angina due to coronary disease, lowering blood cholesterol and triglycerides, reducing blood platelet agglutination, and for treating impotency, psoriasis and pigmentation. For improving ischemic electrocardiogram, with relief of angina and reduction of amount of nitroglycerin used, and relief of palpitation. For improving a patient's tolerance to exercise with extension of exercise sustainability and improvement on the interval between start of exercise and onset of angina as well as the 1 mm interval decrease between start of exercise to ST stage. Also

for treating e.g. amnesia, senile dementia (Alzheimer disease), arteriosclerosis, arthritis, asthma, atherosclerosis, autism, coronary disease, deafness, dizziness, headache, high blood pressure, circulatory disorder, Parkinson's disease, renal dysfunction, rheumatism, filariasis, tuberculosis, tinnitus and vertigo.

ADVANTAGE - The extraction process is improved and is more effective than prior art **methods**.

Member(0003)
ABEQ US 6030621 A UPAB 20060115

NOVELTY - Composition comprises:

(a) 44-78% **flavonoids**;
(b) 2.5-10% ginkgolides A, B, C, J or their mixture;
(c) 2.5-10% bilobalide; and
(d) 0.1-5 ppm ginkgolic acid.

DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for:

(i) drug compositions prepared using the above substances extracted from Ginkgo biloba leaves; and

(ii) a **method** for preparing the composition.

ACTIVITY - Antianginal; antilipemic; vasotropic; antipsoriatic; nootropic; neuroprotective; antiarteriosclerotic; antiarthritic; antiasthmatic; cardiant; auditory; analgesic; hypotensive; antiparkinsonian; antirheumatic; tuberculostatic.

USE - Useful as a drug, additive to **food, drinks** and **cosmetics**, and for treating various types of angina due to coronary disease, lowering blood cholesterol and triglycerides, reducing blood platelet agglutination, and for treating impotency, psoriasis and pigmentation. For improving ischemic electrocardiogram, with relief of angina and reduction of amount of nitroglycerin used, and relief of palpitation. For improving a patient's tolerance to exercise with extension of exercise sustainability and improvement on the interval between start of exercise and onset of angina as well as the 1 mm interval decrease between start of exercise to ST stage. Also for treating e.g. amnesia, senile dementia (Alzheimer disease), arteriosclerosis, arthritis, asthma, atherosclerosis, autism, coronary disease, deafness, dizziness, headache, high blood pressure, circulatory disorder, Parkinson's disease, renal dysfunction, rheumatism, filariasis, tuberculosis, tinnitus and vertigo.

ADVANTAGE - The extraction process is improved and is more effective than prior art **methods**.

Member(0004)
ABEQ GB 2352177 A UPAB 20060115

NOVELTY - Composition comprises:

(a) 44-78% **flavonoids**;
(b) 2.5-10% ginkgolides A, B, C, J or their mixture;
(c) 2.5-10% bilobalide; and
(d) 0.1-5 ppm ginkgolic acid.

DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for:

(i) drug compositions prepared using the above substances extracted from Ginkgo biloba leaves; and

(ii) a **method** for preparing the composition.

ACTIVITY - Antianginal; antilipemic; vasotropic; antipsoriatic; nootropic; neuroprotective; antiarteriosclerotic; antiarthritic; antiasthmatic; cardiant; auditory; analgesic; hypotensive; antiparkinsonian; antirheumatic; tuberculostatic.

USE - Useful as a drug, additive to **food, drinks**

and **cosmetics**, and for treating various types of angina due to coronary disease, lowering blood cholesterol and triglycerides, reducing blood platelet agglutination, and for treating impotency, psoriasis and pigmentation. For improving ischemic electrocardiogram, with relief of angina and reduction of amount of nitroglycerin used, and relief of palpitation. For improving a patient's tolerance to exercise with extension of exercise sustainability and improvement on the interval between start of exercise and onset of angina as well as the 1 mm interval decrease between start of exercise to ST stage. Also for treating e.g. amnesia, senile dementia (Alzheimer disease), arteriosclerosis, arthritis, asthma, atherosclerosis, autism, coronary disease, deafness, dizziness, headache, high blood pressure, circulatory disorder, Parkinson's disease, renal dysfunction, rheumatism, filariasis, tuberculosis, tinnitus and vertigo.

ADVANTAGE - The extraction process is improved and is more effective than prior art **methods**.

Member(0005)
ABEQ US 6187314 B1 UPAB 20060115

NOVELTY - Composition comprises:
(a) 44-78% **flavonoids**;
(b) 2.5-10% ginkgolides A, B, C, J or their mixture;
(c) 2.5-10% bilobalide; and
(d) 0.1-5 ppm ginkgolic acid.

DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for:

(i) drug compositions prepared using the above substances extracted from Ginkgo biloba leaves; and

(ii) a **method** for preparing the composition.

ACTIVITY - Antianginal; antilipemic; vasotropic; antipsoriatic; nootropic; neuroprotective; antiarteriosclerotic; antiarthritic; antiasthmatic; cardiant; auditory; analgesic; hypotensive; antiparkinsonian; antirheumatic; tuberculostatic.

USE - Useful as a drug, additive to **food, drinks** and **cosmetics**, and for treating various types of angina due to coronary disease, lowering blood cholesterol and triglycerides, reducing blood platelet agglutination, and for treating impotency, psoriasis and pigmentation. For improving ischemic electrocardiogram, with relief of angina and reduction of amount of nitroglycerin used, and relief of palpitation. For improving a patient's tolerance to exercise with extension of exercise sustainability and improvement on the interval between start of exercise and onset of angina as well as the 1 mm interval decrease between start of exercise to ST stage. Also for treating e.g. amnesia, senile dementia (Alzheimer disease), arteriosclerosis, arthritis, asthma, atherosclerosis, autism, coronary disease, deafness, dizziness, headache, high blood pressure, circulatory disorder, Parkinson's disease, renal dysfunction, rheumatism, filariasis, tuberculosis, tinnitus and vertigo.

ADVANTAGE - The extraction process is improved and is more effective than prior art **methods**.

Member(0006)
ABEQ CN 1292704 A UPAB 20060115

NOVELTY - Composition comprises:
(a) 44-78% **flavonoids**;
(b) 2.5-10% ginkgolides A, B, C, J or their mixture;
(c) 2.5-10% bilobalide; and
(d) 0.1-5 ppm ginkgolic acid.

DETAILED DESCRIPTION - **INDEPENDENT** CLAIMS are also included for:

(i) drug compositions prepared using the above substances extracted from Ginkgo biloba leaves; and

(ii) a **method** for preparing the composition.

ACTIVITY - Antianginal; antilipemic; vasotropic; antipsoriatic; nootropic; neuroprotective; antiarteriosclerotic; antiarthritic; antiasthmatic; cardiant; auditory; analgesic; hypotensive; antiparkinsonian; antirheumatic; tuberculostatic.

USE - Useful as a drug, additive to **food, drinks** and **cosmetics**, and for treating various types of angina due to coronary disease, lowering blood cholesterol and triglycerides, reducing blood platelet agglutination, and for treating impotency, psoriasis and pigmentation. For improving ischemic electrocardiogram, with relief of angina and reduction of amount of nitroglycerin used, and relief of palpitation. For improving a patient's tolerance to exercise with extension of exercise sustainability and improvement on the interval between start of exercise and onset of angina as well as the 1 mm interval decrease between start of exercise to ST stage. Also for treating e.g. amnesia, senile dementia (Alzheimer disease), arteriosclerosis, arthritis, asthma, atherosclerosis, autism, coronary disease, deafness, dizziness, headache, high blood pressure, circulatory disorder, Parkinson's disease, renal dysfunction, rheumatism, filariasis, tuberculosis, tinnitus and vertigo.

ADVANTAGE - The extraction process is improved and is more effective than prior art **methods**.

L23 ANSWER 39 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1999-619705 [53] WPIDS
DOC. NO. CPI: C1999-180864 [53]
TITLE: Compositions comprising the soluble bioflavonoid quercetin **chalcone**, useful for treating allergies and allergic reactions
DERWENT CLASS: B05
INVENTOR: BIRDSALL T C; CZAP A F
PATENT ASSIGNEE: (THOR-N) THORNE RES INC
COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 5977184	A	19991102	(199953)*	EN	4[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5977184 A		US 1995-528682	19950915

PRIORITY APPLN. INFO: US 1995-528682 19950915
AN 1999-619705 [53] WPIDS
AB US 5977184 A UPAB: 20050523
NOVELTY - Soluble compositions comprising the soluble bioflavonoid quercetin **chalcone** and a carrier are claimed.
DETAILED DESCRIPTION - Compositions comprise the soluble bioflavonoid quercetin **chalcone** (2',3,4,4',6' **pentahydroxychalcone**) (I) and a carrier.
ACTIVITY - Antiallergic; antiasthmatic; antigout; antidiabetic; anti-inflammatory; anticancer; antiviral; antioxidant.
MECHANISM OF ACTION - Xanthane oxidase inhibitor; aldose reductase inhibitor; phospholipase A2 inhibitor; lipoxygenase inhibitor.

USE - For treating allergies and allergic reactions, e.g. hay fever, asthma, allergic rhinitis, sinusitis, allergic conjunctivitis and **food** allergies. ADVANTAGE - (I) is more soluble and has enhanced bioavailability compared with quercetin. Unlike other soluble **chalcone bioflavonoids**, the **solubility** of (I) is partly due to presence of hydroxy groups and not other bioactivity limiting substituents, e.g. sugar or polysaccharide substituents.

L23 ANSWER 40 OF 60 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 7

ACCESSION NUMBER: 1999:313274 BIOSIS Full-text
DOCUMENT NUMBER: PREV199900313274
TITLE: Fate of xanthohumol and related **prenylflavonoids** from hops to beer.
AUTHOR(S): Stevens, Jan F. [Reprint author]; Taylor, Alan W.; Clawson, Jeff E.; Deinzer, Max L.
CORPORATE SOURCE: Department of Chemistry, Oregon State University, Corvallis, OR, 97331, USA
SOURCE: Journal of Agricultural and Food Chemistry, (June, 1999) Vol. 47, No. 6, pp. 2421-2428. print.
CODEN: JAFCAU. ISSN: 0021-8561.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 17 Aug 1999
Last Updated on STN: 30 Sep 1999

AB The fate of three prenylated **flavonoids** of the **chalcone** type, xanthohumol, desmethylxanthohumol, and 3'- **geranylchalconaringenin**, was monitored with LC/MS-MS from hops (Humulus lupulus L.) to beer in two brewing trials. The three **prenylchalcones** were largely converted into their isomeric **flavanones**, isoxanthohumol, prenylnaringenins, and geranylnaringenins, respectively, in the boiling wort. Losses of **prenylflavonoids** were due to incomplete extraction from the hops into the wort (13-25%), adsorption to insoluble malt proteins (18-26%), and adsorption to yeast cells (11-32%) during fermentation. The overall yield of xanthohumol, after lagering of the beer and largely in the form of isoxanthohumol, amounted to 22-30% of the hops' xanthohumol. About 10% of the hops' desmethylxanthohumol, completely converted into prenylnaringenins, remained in the beers. 3'- **Geranylchalconaringenin** behaved similarly to desmethylxanthohumol. **Solubility** experiments indicated that (1) malt carbohydrates formsoluble complexes with xanthohumol and isoxanthohumol and (2) **solubility** does not dictate the isoxanthohumol levels of finished beers.

L23 ANSWER 41 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN

ACCESSION NUMBER: 499628 FROSTI Full-text
TITLE: The power of powders.
AUTHOR: Nickerson J.
SOURCE: Functional Foods, 1999, (June), 2 (8), 26-28 (4 ref.)
ISSN: 1462-0286
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Fruit powders are produced by spray-drying fruit concentrates using magnesium citrate as carrier. The powders have a high percentage of fruit solids, contain the components of the original fruit, have a concentrated and stable colour, and have good **solubility** and blendability with other fruit flavours. The production and characteristics of Ocean Spray cranberry, strawberry, and blueberry powders are described. The beneficial effects of the components of fruit powders, such as **anthocyanins** and other **flavonoids**, are highlighted, and levels of **anthocyanins** found in various fruit powders are set out.

Possible effects include anti-carcinogenic and anti-ageing effects. Fruit powders are increasingly being used for nutraceutical applications.

L23 ANSWER 42 OF 60 MEDLINE on STN
ACCESSION NUMBER: 1999075393 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 9860050
TITLE: Antioxidant properties of catechins and proanthocyanidins: effect of polymerisation, galloylation and glycosylation.
AUTHOR: Plumb G W; De Pascual-Teresa S; Santos-Buelga C; Cheynier V; Williamson G
CORPORATE SOURCE: Biochemistry Department, Institute of Food Research, Norwich Research Park, Colney, UK.. geoff.plumb@bbsrc.ac.uk
SOURCE: Free radical research, (1998 Oct) Vol. 29, No. 4, pp. 351-8.
Journal code: 9423872. ISSN: 1071-5762.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199902
ENTRY DATE: Entered STN: 11 Mar 1999
Last Updated on STN: 11 Mar 1999
Entered Medline: 23 Feb 1999

AB A range of catechins and oligomeric procyanidins was purified by high performance liquid chromatography (HPLC) from grape seed, apple skin, lentil and almond flesh. Catechins, galloylated epicatechin, glycosylated catechin, procyanidin dimers, galloylated dimers, trimer, and tetramer species were all **identified**, purified and quantified by HPLC, LC-MS and NMR. The antioxidant properties of these compounds were assessed using two **methods**: (a) inhibition of ascorbate/iron-induced peroxidation of phosphatidylcholine liposomes; (b) scavenging of the radical cation of 2,2'-azinobis(3-ethyl-benzothiazoline- 6-sulphonate) (ABTS) relative to the **water**-soluble vitamin E analogue Trolox C (expressed as Trolox C equivalent antioxidant capacity, TEAC). Antioxidant activity in the lipid phase decreased with polymerisation in contrast with antioxidant action in the aqueous phase which increased from monomer to trimer and then decreased from trimer to tetramer. Galloylation of catechin and dimeric procyanidins decreased lipid phase and increased aqueous phase antioxidant activity. Glycosylation of catechin demonstrated decreased activity in both phases.

L23 ANSWER 43 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 489257 FROSTI Full-text
TITLE: Extraction and purification of rutin from tobacco leaf protein technology wastes.
AUTHOR: Miniati E.; Montanari L.
SOURCE: Italian Journal of Food Science, 1998, 10 (4), 339-349 (18 ref.)
ISSN: 1120-1770
DOCUMENT TYPE: Journal
LANGUAGE: English
SUMMARY LANGUAGE: English; Italian

AB Rutin (quercetin 3-rhamnoglucoside) is a biologically important flavonoid. It is used in the **food** industry as a natural antioxidant, a chelating agent, a stabilizer for **anthocyanin** colourings, a source of rhamnose, and a preservative and antimicrobial agent. Sources of rutin include buckwheat (Fagopyrum esculentum) and tobacco leaves. Rutin may be extracted from the final serum from wet protein fractionation of tobacco leaves, and

optimization of this procedure could offer a new and important source of rutin. A rapid and reproducible HPLC technique is described for determination of rutin in this serum. The process involves a single extraction with n-butyl alcohol, concentration of the extract, and redissolving this in **water** followed by recrystallization. The extract contained about 40% rutin of greater than 97% purity. High levels of sulfur dioxide (added during processing of tobacco leaves) and metal ions can cause problems with hyper-**solubility** of **flavonoids**.

L23 ANSWER 44 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 562004 FROSTI Full-text
TITLE: Natural colours: red/blue colours.
AUTHOR: Collins P.; Sexton N.
SOURCE: Ingredients handbook: food colours., Published by: LFRA, Leatherhead, 1997, 55-76 (28 ref.)
Leatherhead Food Research Association; Dalzell J.M.
NOTE: REFERENCE ONLY
DOCUMENT TYPE: (Leatherhead Food Research Association publication)
LANGUAGE: English

AB This book chapter covers the chemical structure, classification, colour shades, physical characteristics, nutritional properties, stability, **solubility**, and applications of natural red and blue **food** colourings. **Anthocyanins** (grape skin extract), beet red (betalain), carmine (cochineal), lycopene, and paprika extract (capsanthin, capsorubin) are discussed. The author refers to safety of these ingredients, relevant legislation, and analytical **methods** for their determination. Applications include fruit **drinks**, frozen desserts, jams and fruit preserves, sugar confectionery, dry mixes, ice cream, dairy products, snack **foods**, meat products, bakery products, pie fillings, spreads, dietary supplements, sauces, pickles, and spice mixtures.

L23 ANSWER 45 OF 60 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1997-343640 [32] WPIDS
DOC. NO. CPI: C1997-123737 [36]
TITLE: Stabilised compositions for treating e.g. bronchial and lung diseases - comprise cysteine compounds, especially N-acetyl cysteine and/or glutathione, non-steroidal antiphlogistic/analgetic (NSAID), and stabilising mixture
DERWENT CLASS: A97; B05
INVENTOR: STANISLAUS F
PATENT ASSIGNEE: (CHEH-C) KLINGE PHARMA GMBH; (CHEH-C) KLINGE PHARMA GMBH & CO KG; (STAN-I) STANISLAUS F
COUNTRY COUNT: 75

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
DE 29707005	U1	19970626	(199732)*	DE	37[0]	
WO 9847534	A1	19981029	(199849)#	DE		
AU 9723879	A	19981113	(199913)#	EN		
EP 971743	A1	20000119	(200009)#	DE		
JP 2001524087	W	20011127	(200204)#	JA	37	
US 20020037855	A1	20020328	(200225)#	EN		
US 20030119909	A1	20030626	(200343)#	EN		
EP 971743	B1	20060712	(200654)#	DE		
DE 59712694	G	20060824	(200659)#	DE		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 29707005 U1		DE 1997-29707005	19970418
AU 9723879 A		AU 1997-23879	19970418
EP 971743 A1		EP 1997-919382	19970418
EP 971743 B1		EP 1997-919382	19970418
WO 9847534 A1		WO 1997-EP1941	19970418
EP 971743 A1		WO 1997-EP1941	19970418
JP 2001524087 W		WO 1997-EP1941	19970418
US 20020037855 A1	Cont of	WO 1997-EP1941	19970418
US 20030119909 A1	Cont of	WO 1997-EP1941	19970418
EP 971743 B1		WO 1997-EP1941	19970418
JP 2001524087 W		JP 1998-544767	19970418
US 20020037855 A1	Cont of	US 2000-403160	20000505
US 20030119909 A1	Cont of	US 2000-403160	20000505
US 20020037855 A1		US 2001-816769	20010322
US 20030119909 A1	Cont of	US 2001-816769	20010322
US 20030119909 A1		US 2002-227186	20020821
DE 59712694 G		DE 1997-512694	19970418
DE 59712694 G		EP 1997-919382	19970418
DE 59712694 G		WO 1997-EP1941	19970418

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
AU 9723879	A	Based on	WO 9847534	A
EP 971743	A1	Based on	WO 9847534	A
JP 2001524087	W	Based on	WO 9847534	A
EP 971743	B1	Based on	WO 9847534	A
DE 59712694	G	Based on	EP 971743	A
DE 59712694	G	Based on	WO 9847534	A

PRIORITY APPLN. INFO: DE 1997-29707005 19970418
WO 1997-EP1941 19970418
AU 1997-23879 19970418
EP 1997-919382 19970418
JP 1998-544767 19970418
US 2001-816769 20010322
US 2002-227186 20020821
DE 1997-512694 19970418

AN 1997-343640 [32] WPIDS

AB DE 29707005 U1 UPAB: 20060113

Stabilised pharmaceutical composition (SC) comprises cysteinyl or dicysteinyl compounds (I), especially: (1) N-acetylcysteine for treating bronchial and lung disease; and/or (2) glutathione, optionally in combination with a non-steroidal antiphlogistic/analgetic (NSAID), especially diclofenac, for suppressing organ damage, especially liver and inflammatory damage. (SC) further comprises: (A) a stabilising mixture comprising at least three of the following: (a) ascorbic acid (vitamin C) or its salts or esters; (b) one or more tocopherols (vitamin E); (c) one or more carotinoids and/or vitamin A; and (d) one or more natural or synthetic **flavonoids**, **bioflavonoids**, or catechins, anthocyans and their glycosides; and (B) additives and/or carriers suitable for oral, topical, parenteral or rectal administration. Also claimed is a composition (SC) as above without the stabilising component (A) or containing only one or two of (a)-(d).

USE - N-acetylcysteine exhibits a mucolytic effect and is especially effective as a secretolytic agent in various lung and bronchial diseases such as colds,

inflamed bronchi, and certain asthmatic conditions. N-acetyl-3-[2-benzoylpropyl]-thioalanine) (bencistein) also exhibits some secretolytic effect in the above diseases. Glutathione is useful as an anabolic and L-β,β'-dithiodialanine (dicysteine) is effective against damage due to lack of protein, liver parenchyma diseases, pregnancy toxinosis or furunculosis. (I) reduce muscle damage caused by **physiological** oxidative stress, prevent diabetic vessel damage, reduce oxidative stress in smokers, reduce (late)damage in cytostatic agents administration, especially caused by long term therapy, protect the skin against excessive UV-radiation or other damaging radiation or atmospheric conditions, especially oxidative effects caused by impurities in the air such as ozone, nitric oxide, oxygen radicals, singlet oxygen and other aggressive radicals. (I) are also useful for prophylaxis and therapy of stress-related inflammatory diseases such as pneumonia, hepatitis, nephritis, arteriosclerosis, venal diseases, arteritis of inflammatory or other origin, immune or autoimmune diseases, transplant rejection especially inflammation related transplant rejection, after effects of diabetes on e.g. the vessels, the kidney or retina, perfusion or reperfusion injury, etc.

ADVANTAGE - (SC) has a better stability than prior art compositions. The cysteinyl or dicysteinyl compounds work synergistically with NSAID and analgesics, reducing the side effects associated with these drugs and increasing their effectivity.

Member(0002)

ABEQ WO 1998047534 A1 UPAB 20060113

Stabilised pharmaceutical composition (SC) comprises cysteinyl or dicysteinyl compounds (I), especially: (1) N-acetylcysteine for treating bronchial and lung disease; and/or (2) glutathione, optionally in combination with a non-steroidal antiphlogistic/analgetic (NSAID), especially diclofenac, for suppressing organ damage, especially liver and inflammatory damage. (SC) further comprises: (A) a stabilising mixture comprising at least three of the following: (a) ascorbic acid (vitamin C) or its salts or esters; (b) one or more tocopherols (vitamin E); (c) one or more carotinoids and/or vitamin A; and (d) one or more natural or synthetic **flavonoids**, **bioflavonoids**, or catechins, anthocyans and their glycosides; and (B) additives and/or carriers suitable for oral, topical, parenteral or rectal administration. Also claimed is a composition (SC) as above without the stabilising component (A) or containing only one or two of (a)-(d).

USE - N-acetylcysteine exhibits a mucolytic effect and is especially effective as a secretolytic agent in various lung and bronchial diseases such as colds, inflamed bronchi, and certain asthmatic conditions. N-acetyl-3-[2-benzoylpropyl]-thioalanine) (bencistein) also exhibits some secretolytic effect in the above diseases. Glutathione is useful as an anabolic and L-β,β'-dithiodialanine (dicysteine) is effective against damage due to lack of protein, liver parenchyma diseases, pregnancy toxinosis or furunculosis. (I) reduce muscle damage caused by **physiological** oxidative stress, prevent diabetic vessel damage, reduce oxidative stress in smokers, reduce (late)damage in cytostatic agents administration, especially caused by long term therapy, protect the skin against excessive UV-radiation or other damaging radiation or atmospheric conditions, especially oxidative effects caused by impurities in the air such as ozone, nitric oxide, oxygen radicals, singlet oxygen and other aggressive radicals. (I) are also useful for prophylaxis and therapy of stress-related inflammatory diseases such as pneumonia, hepatitis, nephritis, arteriosclerosis, venal diseases, arteritis of inflammatory or other origin, immune or autoimmune diseases, transplant rejection especially inflammation related transplant rejection, after effects of diabetes on e.g. the vessels, the kidney or retina, perfusion

or reperfusion injury, etc.

ADVANTAGE - (SC) has a better stability than prior art compositions. The cysteinyl or dicysteinyl compounds work synergistically with NSAID and analgesics, reducing the side effects associated with these drugs and increasing their effectivity.

L23 ANSWER 46 OF 60 MEDLINE on STN
ACCESSION NUMBER: 96219079 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 8829532
TITLE: Synthesis of neohesperidin glycosides and naringin glycosides by cyclodextrin glucanotransferase from an alkalophilic Bacillus species.
AUTHOR: Kometani T; Nishimura T; Nakae T; Takii H; Okada S
CORPORATE SOURCE: Biochemical Research Laboratory, Ezaki Glico Co., Ltd., Osaka, Japan.
SOURCE: Bioscience, biotechnology, and biochemistry, (1996 Apr) Vol. 60, No. 4, pp. 645-9.
Journal code: 9205717. ISSN: 0916-8451.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Biotechnology
ENTRY MONTH: 199610
ENTRY DATE: Entered STN: 25 Oct 1996
Last Updated on STN: 25 Oct 1996
Entered Medline: 17 Oct 1996

AB Cyclodextrin glucanotransferase from an alkalophilic Bacillus species produced neohesperidin monoglucoside and a series of its maltooligoglucosides by transglycosylation with neohesperidin as an acceptor and soluble starch as a donor. As the reaction using beta-CD as a donor at an alkaline pH was very effective for **solubilizing** neohesperidin, the amount of glycosides formed was increased. As a result, its amount with beta-CD at pH 10 was about 7 times greater than that with soluble starch at pH 5. Neohesperidin monoglucoside was purified from the reaction mixture by glucoamylase and naringinase treatments, an Amberlite XAD-16 column, a Sephadex LH20 column, and HPLC on an ODS column. The structure of the purified monoglucoside was **identified** as 3G-alpha-D-glucopyranosyl neohesperidin by FAB-MS, methylation analysis, and 1H- and 13C-NMR. The **solubility** of neohesperidin monoglucoside in **water** was approximately 1500 times higher than that of neohesperidin, and the bitterness of the monoglucoside was about 10 times less than that of neophesperidin. In addition, naringin was also glycosylated by the same **method** as neohesperidin, and its monoglucoside was **identified** as 3G-alpha-D-glucopyranosyl naringin. The **solubility** of naringin monoglucoside in **water** was also at least 1000 times higher than that of naringin without altering its bitterness.

L23 ANSWER 47 OF 60 FSTA COPYRIGHT 2007 IFIS on STN
ACCESSION NUMBER: 1997(05):H0071 FSTA Full-text
TITLE: Solid-state .sup.1.sup.3C NMR investigations of insoluble deposits in **aromatic** bitters.
AUTHOR: Refsgaard, H. H. F.; Schaumberg, K.; Skibsted, L. H.
CORPORATE SOURCE: Correspondence (Reprint) address, L. H. Skibsted, KVL Cent. of Food Res., Royal Vet. & Agric. Univ., DK-1958 Frederiksberg C, Denmark
SOURCE: Zeitschrift fuer Lebensmittel-Untersuchung und -Forschung, (1996) 203 (3) 287-292, 35 ref.
ISSN: 0044-3026
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Aromatic** bitters are spirits based **beverages** flavoured with plant materials; insoluble deposits may form in these **beverages**, and present a problem with consumer acceptance. Insoluble deposits in **aromatic** bitters (DM concentration 1.67%, alcohol concentration 38% by volume) made with extracts of approx. 30 plant materials were analysed by .sup.1.sup.3C NMR spectroscopy. The deposit comprised a coprecipitate of plant polyphenols, proteins and carbohydrates. Polyphenols in the deposit included **flavonoids** such as **anthocyanins** and anthocyanidins; glucose, peptides and cinnamic acid derivatives were also present. Formation of the deposit in **aromatic** bitters was accelerated by addition of the radical initiator 2,2'-azobis(2-amidinopropane) dihydrochloride or addition of H.sub.2O.sub.2 in combination with iron(III) nitrate and ascorbic acid as a Fenton reagent. Polymerization of catechin and pelargonidin was shown in model experiments to be oxidative, and accelerated by exposure to light. A mechanism involving oxidative copolymerization of polyphenols followed by coprecipitation of polymerized polyphenols, proteins and carbohydrates is proposed for formation of insoluble deposits in **aromatic** bitters. [From En summ.]

L23 ANSWER 48 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2007) on STN

ACCESSION NUMBER:	95:20393 AGRICOLA Full-text
DOCUMENT NUMBER:	IND20451127
TITLE:	Characterization of flavonoid 3', 5'-hydroxylase in microsomal membrane fraction of Petunia hybrida flowers.
AUTHOR(S):	Menting, J.G.T.; Scopes, R.K.; Stevenson, T.W.
CORPORATE SOURCE:	La Trobe University, Bundoora, Victoria, Australia
AVAILABILITY:	DNAL (450 P692)
SOURCE:	Plant physiology, Oct 1994. Vol. 106, No. 2. p. 633-642 Publisher: Rockville, MD : American Society of Plant Physiologists, 1926- CODEN: PLPHAY; ISSN: 0032-0889
NOTE:	Includes references
PUB. COUNTRY:	Maryland; United States
DOCUMENT TYPE:	Article; Conference
FILE SEGMENT:	U.S. Imprints not USDA, Experiment or Extension
LANGUAGE:	English

AB We have deteded a flavonoid 3',5'-hydroxylase (F3',5'H) in the microsomal fraction of Petunia hybrida flowers. Activity varied with the development of flowers, peaking immediately prior to and during anthesis, but was absent in mature flowers. F3',5'H activity in flower extracts from genetically defined floral color mutants correlated strictly with the genotypes Hf1 and Hf2. No activity was detected in flowers from mutants homozygous recessive for both alleles. F3', 5'H activity was dependent on NADPH and molecular oxygen; there was only slight activity with NADH. The enzyme catalyzes the hydroxylation of 5,7,4'-trihydroxyflavonone at the 3' and 5' positions, and of 5,7,3',4'-tetrahydroxyflavonone and dihydroquercetin at the 5' position. Hydroxylase activity was inhibited by plant growth regulators (1-aminobenzotriazole and tetcyclacis) and by CO, N-ethylmaleimide, diethyldithiocarbamate, and cytochrome (Cyt) c. Activity was not affected by diethylpyrocarbonate or phenylmethylsulfonyl fluoride, but was enhanced by 2-mercaptoethanol. A polyclonal antibody that inhibits higher plant NADPH-Cyt-P450 reductase inhibited the F3',5'H. The data are consistent with the suggestion that the P. hybrida F3',5'H is a monooxygenase consisting of a Cyt P450 and a NADPH-Cyt P-450 reductase. Cyts P450 were detected in microsomal membranes and in **solubilized detergent** extracts of these membranes. F3',5'H adivity was

sensitive to low concentrations of all **detergents** tested, and therefore **solubilization** of the active enzyme was not achieved. Reaction products other than **flavanones** were observed in F3',5'H assays and these may be formed by enzymic oxidation of **flavanones** . The possibility of a microsomal flavone synthase of a type that has not been described in P. hybrida is discussed.

L23 ANSWER 49 OF 60 FSTA COPYRIGHT 2007 IFIS on STN
ACCESSION NUMBER: 1995(01):H0060 FSTA Full-text
TITLE: Reactions of monomeric and polymeric flavan-3-ols with monomeric pigment in model wine solutions.
AUTHOR: Thorngate, J. H., III; Singleton, V. L.
CORPORATE SOURCE: Correspondence (Reprint) address, V. L. Singleton, Dep. of Viticulture & Enology, Univ. of California, Davis, CA 95616-8749, USA
SOURCE: American Journal of Enology and Viticulture, (1994) 45 (3) 349-352, 21 ref.
ISSN: 0002-9254
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pinot noir seeds contain a greater proportion of monomeric flavan-3-ols (catechins) to polymeric flavan-3-ols (tannin) than do Cabernet Sauvignon seeds. As Pinot noir wines are typically less tannic than Cabernet wines, it was hypothesized that the 'excess' catechins were preferentially reacting with monomeric **anthocyanins**, preventing the formation of the **anthocyanin**-tannin adduct which serves to **solubilize** tannin. Competition studies in model wine solutions, however, showed that for monoglucosidic **anthocyanins**, the catechins were not competing with tannin in the formation of an **anthocyanin** adduct, but rather that the catechins and tannin were preferentially reacting with each other in a dynamic process of interflavan bond formation and breakage. However, for diglucosidic **anthocyanin**, the catechins did react preferentially to the tannin in the formation of the adduct. The putative stabilizing mechanism of monoglucosidic **anthocyanin** and tannin condensation never occurred during the course of the experiment, supporting the contention that the time-course of this reaction is slow.

L23 ANSWER 50 OF 60 FSTA COPYRIGHT 2007 IFIS on STN
ACCESSION NUMBER: 1994(03):H0039 FSTA Full-text
TITLE: [Monomeric and polymeric **anthocyanins** in red wine during the ageing process.]
AUTHOR: Tamborra, P.
CORPORATE SOURCE: Istituto Sperimentale per l'Enologia, SOP di Barletta, 70051 Barletta, Italy
SOURCE: Rivista di Viticoltura e di Enologia, (1993) 46 (2) 61-74, 14 ref.
DOCUMENT TYPE: Journal
LANGUAGE: Italian
SUMMARY LANGUAGE: English
AB The monomeric and polymeric **anthocyanins** in 10 Rosso Barletta and Castel del Monte DOC red wines, made from Uva di Troia var. grapes, and aged from 0 to 33 yr, were separated by chromatography on Sephadex LH-220 resin, and determined quantitatively by the **method** of Riberau-Gayon & Stonestreet involving decoloration with SO.sub.2 and acidification with HCl (in young wines aged ≤1 yr only) or by measuring the absorbance at the maximum visible wavelength [see Di Stefano et al., Enotecnico (1989) 25 (5) 83-89]. Large concentration of monomeric **anthocyanins** were found in the young, non-aged wines (277-426 mg/l), dropping to approx. 70 mg/l after 3-6 yr, afterwards remaining at this level. Concentration of polymeric **anthocyanins** varied little with ageing, remaining at approx. 90 mg/l over the whole period involved, but precipitating out when

their degree of polymerization caused **insolubilization**. Additionally, 1 rose and 1 red wine were analysed by the SO.sub.2 **method** after ageing for 1 yr; the rose had a less intense colour, but a higher **anthocyanin** content, while the red had an intense colour and more **flavonoids**. A hypothesis to account for this difference is put forward.

L23 ANSWER 51 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2007) on STN

ACCESSION NUMBER: 92:64240 AGRICOLA Full-text
DOCUMENT NUMBER: IND92037193
TITLE: Blue and ultraviolet-B light photoreceptors in parsley cells.
AUTHOR(S): Ensminger, P.A.; Schafer, E.
CORPORATE SOURCE: Albert-Ludwig Universitat, Freiburg, FRG
AVAILABILITY: DNAL (382 P56)
SOURCE: Photochemistry and photobiology, Mar 1992. Vol. 55, No. 3. p. 437-447
Publisher: Oxford : Pergamon Press.
CODEN: PHCBAP; ISSN: 0031-8655
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

AB Ultraviolet-B (UV-B) and blue light photoreceptors have been shown to regulate **chalcone** synthase and flavonoid synthesis in parsley cell cultures. These photoreceptors have not yet been identified. In the present work, we studied UV-B photoreception with **physiological** experiments involving temperature shifts and examined the possible role of flavin in blue and UV-B light photoreception. Cells irradiated with UV-B light (0.5-15 min) at 2 degrees C have the same fluence requirement for **chalcone** synthase and flavonoid induction as controls irradiated at 25 degrees C. This is indicative of a purely photochemical reaction. Cells fed with riboflavin and irradiated with 6 h of UV-containing white light synthesize higher levels of **chalcone** synthase and flavonoid than unfed controls. This effect did not occur with blue light. These results indicate that flavin-sensitization requires excitation of flavin and the UV-B light photoreceptor. The in vivo kinetics of flavin uptake and bleaching indicate that the added flavin may act at the surface of the plasma membrane. In view of the likely role of membrane-associated flavin in photoreception, we measured in vitro flavin binding to microsomal membranes. At least one microsomal flavin binding site was **solubilized** by resuspension of a microsomal pellet in buffer with high Kpi and NaCl concentrations and centrifugation at 38000 g. The 38000 g insoluble fraction had much greater flavin binding and contained a receptor with an apparent about 3.6 micromoles and an estimated in vivo concentration of at least 6.7 x 10(-8) M. Flavin mononucleotide, roseoflavin, and flavin adenine dinucleotide can compete with riboflavin for this binding site(s), although each has lower affinity than riboflavin. Most microsomal protein was **solubilized** by resuspension of the microsomal pellet in non-denaturing **detergents** and centrifugation at 38000 g; however, this inhibited flavin binding, presumably because of disruption of the environment of the flavin receptor. The parsley microsomal flavin binding receptor(s) have a possible role in **physiological** photoreception.

L23 ANSWER 52 OF 60 MEDLINE on STN
ACCESSION NUMBER: 91115679 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 2276973
TITLE: BE-14348 substances, new specific estrogen-receptor binding

inhibitors. Production, isolation, structure determination and biological properties.
AUTHOR: Kondo H; Nakajima S; Yamamoto N; Okura A; Satoh F; Suda H; Okanishi M; Tanaka N
CORPORATE SOURCE: Exploratory Research Laboratories, Banyu Pharmaceutical Co., Ltd., Tokyo, Japan.
SOURCE: The Journal of antibiotics, (1990 Dec) Vol. 43, No. 12, pp. 1533-42.
Journal code: 0151115. ISSN: 0021-8820.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199103
ENTRY DATE: Entered STN: 29 Mar 1991
Last Updated on STN: 3 Feb 1997
Entered Medline: 5 Mar 1991

AB Streptomyces graminofaciens BA14348, isolated from a soil sample, was found to produce new specific inhibitors of estrogen binding to its receptor. Five related substances, BE-14348A approximately E, were isolated, and their structures were determined by analyses of spectral properties. Of these substances, A was **identical** with the known **flavanone**, naringenin. On the other hand, B, C, D and E were all new compounds; the structure of B was determined to be 2(S): 3(S)-3-methyl-4',5,7-**trihydroxyflavanone**, C was a racemic mixture of 2(S): 3 (R) and 2(R): 3(S)-3-methyl-4',5,7-**trihydroxyflavanone**; D and E were 8-chloro derivatives of B and C, respectively.

L23 ANSWER 53 OF 60 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 1982:169788 BIOSIS Full-text
DOCUMENT NUMBER: PREV198273029772; BA73:29772
TITLE: FLAVONOID CHARACTERISTICS OF SOME SAGEBRUSH SPECIES OF THE SUBGENUS SERIPHIDIUM.
AUTHOR(S): RYAKHOVSKAYA T V [Reprint author]; ALYUKINA L S
CORPORATE SOURCE: INST BOT, ACAD SCI KAZ SSR, ALMA-ATA, USSR
SOURCE: Izvestiya Akademii Nauk Kazakhskoi SSR Seriya Biologicheskaya, (1980) No. 4, pp. 7-11.
CODEN: IKABAR. ISSN: 0002-3183.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: RUSSIAN

AB Nine spp. of the subgenus Seriphidium (Bess.) Rouy of the Lessingiana cycle collected from different Oblasts of the Kazakh SSR, USSR, were studied: the Lessing-like, Kara Tau, Aral, Semirechensk, Ostriikov, Tien Shan, trans-Ili, polistikha and santolina artemisias. **Flavonoids** of the Lessing-like Artemisia were divided into aglycone (ester) and glycoside (alcohol) fractions according to their **solubility** in organic solvents. According to data from paper and column chromatography and chemical and spectral studies aglycone 1 was **identified** as 5,7,3',-4'-dihydroxyflavone or luteolin, aglycone 5 as 7-methoxy-5,4'-dihydroxyflavone or genkwanin and aglycone 11 as 5,7,3',4'-tetrahydroxyflavone or 3-O-methylquercetin. Two glycosides were isolated from the glycoside fraction: glycoside 1 was determined to be vicenin-2 and **identified** as C-diglycoside of apigenin and glycoside 2 was an O-glycoside and was **identified** as rutin. Flavonols, flavones, isoflavones, **aurones**, phenol acids and coumarins were **identified** by color reaction in Artemisia spp. of the Seriphidium subgenus. A comparative chromatographic analysis revealed that flavone glycosides (luteolin, apigenin), caffeic acid and chlorogenic acid were characteristic for the genus, Artemisia as a whole. The presence of C-

glycosides of apigenin and methylated forms were characteristic for the Lessingiana cycle of the subgenus Seriphidium (Bess.) Rouy. The obtained data could be used in chemotaxonomic analysis of the genus Artemisia.

L23 ANSWER 54 OF 60 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 8
ACCESSION NUMBER: 1980:150359 BIOSIS Full-text
DOCUMENT NUMBER: PREV198069025355; BA69:25355
TITLE: PHLORETIN AND RELATED COMPOUNDS INHIBIT AGONIST STIMULATED CYCLIC AMP ACCUMULATION IN CULTURED CELLS OF CENTRAL NERVOUS SYSTEM ORIGIN.
AUTHOR(S): ORTMANN R [Reprint author]; NUTTO D; WALDMEYER J
CORPORATE SOURCE: PHARM DIV, RES DEP, CIBA-GEIGY, CH-4002 BASEL, SWITZ
SOURCE: Biochemical Pharmacology, (1979) Vol. 28, No. 15, pp. 2357-2362.
CODEN: BCPCA6. ISSN: 0006-2952.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB The **dihydrochalcone** phloretin, related **flavonoids** and diethylstilbestrol inhibit agonist induced c[cyclic]AMP accumulation with different potencies in human astrocytoma 1321N1 cells and murine neuroblastoma N4TG3 cells. The inhibition is not agonist specific, abolished by glycosidation of the inhibitor, irreversible by washing, Ca **independent** and increases with time during preincubation period. Measurement of dipole moments and estimation of lipid **solubility** of the inhibitors indicate that lipophilicity is important for their inhibitory potency. The structure-activity relationship of different inhibitors resembles their inhibitory potency in the hexose transport system of red blood cells. [The data suggest that these substances inhibit cAMP accumulation by interaction with membrane lipids rather than interaction with agonist receptor sites.].

L23 ANSWER 55 OF 60 FSTA COPYRIGHT 2007 IFIS on STN
ACCESSION NUMBER: 1973(01):J0093 FSTA Full-text
TITLE: [Biologically active compounds in preserved apples.]
AUTHOR: Stundzhya, R. A.; Shnaidman, L. O.
CORPORATE SOURCE: Kaunasskii Konservnyi Zavod, USSR
SOURCE: Konservnaya i Ovoshchesushil'naya Promyshlennost', (1972) 27 (3) 32-33
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Losses of **bioflavonoids** were studied during the manufacture of juice, puree, fruit salad, jam and baby **foods** from apples. Losses are due to oxidase activity, high temperature applied during pasteurization and possibly also due to **bioflavonoids insolubility** which has as a result losses of **bioflavonoids** in the wastes. During apple puree manufacture losses of **bioflavonoids** amount to 20-25%, in apple salad the losses are as high as 65%. Apple juice contained relatively small quantities of **bioflavonoids** and was therefore enriched by rose-hip juice or blackcurrant juice. Rose-hip juice contained 500-530 mg% vitamin C, 930-970 mg% vitamin B and 35 mg% carotene. Apple and rose-hip puree contained 322.2 mg% vitamin B, from which 179 mg% were catechins and 3.2 mg% **anthocyanins**; 65.0 mg% vitamin C; 0.12 mg% carotenoids, 0.23 mg% vitamin K and 0.14 mg% nicotinic acid.

L23 ANSWER 56 OF 60 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 1952:23829 BIOSIS Full-text

DOCUMENT NUMBER: PREV19522600023897; BA26:23897
TITLE: Failure of rutin and related **flavonoids** to influence mortality following acute whole body X-irradiation.
AUTHOR(S): DAUER, MAXWELL; COON, J. M.
CORPORATE SOURCE: U. Chicago
SOURCE: PROC SOC EXPTL BIOL AND MED, (1952) Vol. 79, No. 4, pp. 702-707.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable
ENTRY DATE: Entered STN: May 2007
Last Updated on STN: May 2007

AB Rutin in the pure, de-ionized, or **solubilized** form had no effect on mortality in mice when administered by stomach tube, in the **drinking water** or diet, or by intraperit. injn. before or after whole body X-irradiation. Similarly, quercitrin, quercetin, hesperidin, hesperidin methyl **chalcone**, dihydroquercetin, homoeriodictyol, naringen, Ca flavonate, xanthorhamnin, de-ionized morin, citrus vit. P, and lemon juice infusion orally or in the diet had no effect in mice. Rutin, hesperidin methyl **chalcone**, and citrus vit. P in the **drinking water** did not benefit rats and guinea pigs. Supplementation of the flavonoid treatment with vit. C did not impart protective action. 1132 mice, 232 rats, and 70 guinea pigs were used in this study. ABSTRACT AUTHORS: J. M. Coon

L23 ANSWER 57 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 564956 FROSTI Full-text
TITLE: **Solubilisation** of flavonols by addition of **anthocyanins.**
INVENTOR: Howard A.N.
SOURCE: UK Patent Application
PATENT INFORMATION: GB 2359992 A
APPLICATION INFORMATION: 20010131
PRIORITY INFORMATION: United States 20000216
DOCUMENT TYPE: Patent
LANGUAGE: English
SUMMARY LANGUAGE: English

AB A **method** of providing soluble flavonol compositions by addition of **anthocyanins** is described. Flavonols are potent antioxidants, which may be used to reduce the incidence of heart disease. Flavonols such as quercetin may be obtained from fruits and vegetables, and their products: apples, onions and red wine are rich in flavonols. The compositions may be obtained by extraction of plant tubers or fruit, and fermentation, to provide the flavonols, and addition of minimum amounts of the highly coloured **anthocyanins**. The compositions may also contain flavouring agents, sweeteners, vitamins, minerals and aspirin, and may be prepared as a fruit or vegetable juice, or wine.

L23 ANSWER 58 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 691360 FROSTI Full-text
TITLE: Esters of **flavonoids** with omega-substituted C6-C22 fatty acids.
INVENTOR: Moussou P.; Falcimaigne A.; Ghoul M.; Danous L.; Pauly G.
PATENT ASSIGNEE: Cognis France SA
SOURCE: European Patent Application
PATENT INFORMATION: EP 1636204 A1
WO 2005000831 20050106

APPLICATION INFORMATION: 20040611
PRIORITY INFORMATION: European Patent Office 20030620
DOCUMENT TYPE: Patent
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Flavonoid esters with omega-substituted C6 to C22 fatty acids and their dietary and medical uses are disclosed. The compounds are claimed to help protect the skin and scalp against damages caused by UV radiation and have antiinflammatory and soothing properties. The chemicals also exhibit very good stability and **solubility** in lipophilic vehicles. The compounds are esters of **flavonoids** such as flavones, flavonols, flavonones, flavanols, flavanolols, isoflavones, **anthocyanins**, proanthocyanidins, **chalcones**, **aurones**, and hydroxycoumarins conjugated by an ester bond to an omega-substituted fatty acid.

L23 ANSWER 59 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 601563 FROSTI Full-text
TITLE: Improvements in or relating to **solubilisation** of flavonols.
INVENTOR: Howard A.N.
SOURCE: European Patent Application
PATENT INFORMATION: EP 1263300 A1
WO 2001060179 20010823
APPLICATION INFORMATION: 20010131
PRIORITY INFORMATION: United States 20000216
DOCUMENT TYPE: Patent
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A **method** is given for increasing the **solubility** in **water** of a flavonol component of a flavonol-containing composition by mixing with an **anthocyanin**-containing component. The presence of **anthocyanin** increases the **water solubility** and bioavailability of the flavonols, especially at neutral or acidic pH values. Flavonols have antioxidant properties and can decrease platelet stickiness and reduce the risk of coronary heart disease.

L23 ANSWER 60 OF 60 FROSTI COPYRIGHT 2007 LFRA on STN
ACCESSION NUMBER: 659454 FROSTI Full-text
TITLE: Esters of **flavonoids** with omega-substituted C6-C22 fatty acids.
INVENTOR: Moussou P.; Falcimaigne A.; Ghoul M.; Danous L.; Pauly G.
PATENT ASSIGNEE: Cognis France SA
SOURCE: PCT Patent Application
PATENT INFORMATION: WO 2005000831 A1
APPLICATION INFORMATION: 20040611
PRIORITY INFORMATION: European Patent Office 20030620
DOCUMENT TYPE: Patent
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Flavonoid esters with omega-substituted C6 to C22 fatty acids and their dietary and medical uses are disclosed. The compounds are claimed to help protect the skin and scalp against damages caused by UV radiation and have antiinflammatory and soothing properties. The chemicals also exhibit very good stability and **solubility** in lipophilic vehicles. The compounds are esters of **flavonoids** such as flavones, flavonols, flavonones, flavanols, flavanolols, isoflavones, **anthocyanins**, proanthocyanidins, **chalcones**, **aurones**, and hydroxycoumarins conjugated by an ester bond to an omega-substituted fatty acid.

SEARCH HISTORY

=> d his ful

(FILE 'HOME' ENTERED AT 16:35:29 ON 26 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:35:42 ON 26 OCT 2007
E FLAVONOIDS/CN
L1 5 SEA ABB=ON FLAVONOIDS?
L2 0 SEA ABB=ON SOYBEAN SAPONIN/CN
E SOYBEAN SAPONINS/CN
L3 1 SEA ABB=ON "SOYBEAN SAPONINS"/CN
E MALONYL ISOFLAVONE GLYCOSIDE/CN
E (FLAVONES OR FLAVONOLS OR FLAVANONES OR FLAVANONOLS OR ISOFLA
L4 1 SEA ABB=ON (FLAVONES OR FLAVONOLS OR FLAVANONES OR FLAVANONOLS OR ISOFLAVONES OR ANTHOCYANINS OR FLAVANOLS OR CHALCONES OR AURONES)/CN

FILE 'HCAPLUS' ENTERED AT 16:37:56 ON 26 OCT 2007
E TSUZAKI SHINICHI/AU
L5 8 SEA ABB=ON "TSUZAKI SHINICHI"/AU
E WANEZAKI SATOSHI/AU
L6 5 SEA ABB=ON "WANEZAKI SATOSHI"/AU
E ARAKI HIDEO/AU
L7 75 SEA ABB=ON "ARAKI HIDEO"/AU
L8 2 SEA ABB=ON L5 AND L6 AND L7
L9 ANALYZE L8 1-2 CT : 16 TERMS
L10 32689 SEA ABB=ON L1 OR ?FLAVONOIDS?
L11 278 SEA ABB=ON L10 AND ?SOLUBIL?
L12 2 SEA ABB=ON L11 AND (L3 OR L4 OR ?SOYBEAN?(W)?SAPONIN? OR ?MALONYL?(W)?ISOFLAVON?(W)?GLYCOSID?)
L13 58 SEA ABB=ON L11 AND (L4 OR ?FLAVANON? OR ?ANTHOCYANIN? OR ?CHALCON? OR ?AURON?)

FILE 'REGISTRY' ENTERED AT 16:44:01 ON 26 OCT 2007
L14 1 SEA ABB=ON WATER/CN

FILE 'HCAPLUS' ENTERED AT 16:44:10 ON 26 OCT 2007
L15 20 SEA ABB=ON L13 AND (L14 OR H2O OR ?WATER?)
L16 58 SEA ABB=ON L13 OR L15
L17 32 SEA ABB=ON L16 AND (?FOOD? OR ?DRINK? OR ?BEVERAG? OR ?MEDICIN? OR ?QUASI?(W)?DRUG? OR ?QUASIDRUG? OR ?COSMET? OR ?ORAL?(W)?PREP? OR ?DENT? OR ?TOOTH? OR ?TEETH? OR ?MOUTH? OR ?AROMATIC? OR ?DEODOR? OR ?DETERG?)
L18 0 SEA ABB=ON L17 AND ?HEALTH?
L19 8 SEA ABB=ON L17 AND (?PHYSIOL? OR ?METHOD?)
L20 32 SEA ABB=ON L17 OR L19
L21 24 SEA ABB=ON L20 AND (PRD<20040624 OR PD<20040624)

FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JAPIO, AGRICOLA, CABA, CROPB, CROPR, CROPU, FSTA, FROSTI, LIFESCI' ENTERED AT 16:48:09 ON 26 OCT 2007
L22 74 SEA ABB=ON L20
L23 60 DUP REMOV L22 (14 DUPLICATES REMOVED)

FILE HOME

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 25 OCT 2007 HIGHEST RN 951442-84-5
DICTIONARY FILE UPDATES: 25 OCT 2007 HIGHEST RN 951442-84-5

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http://www.cas.org/support/stngen/stndoc/properties.html

FILE HCAPLUS

FILE COVERS 1907 - 26 Oct 2007 VOL 147 ISS 19
FILE LAST UPDATED: 25 Oct 2007 (20071025/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE MEDLINE
FILE LAST UPDATED: 25 Oct 2007 (20071025/UP). FILE COVERS 1950 TO DATE.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1926 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1926 TO DATE.

RECORDS LAST ADDED: 24 October 2007 (20071024/ED)

BIOSIS has been augmented with 1.8 million archival records from 1926 through 1968. These records have been re-indexed to match current BIOSIS indexing.

FILE EMBASE
FILE COVERS 1974 TO 26 Oct 2007 (20071026/ED)

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

FILE LAST UPDATED: 5 JAN 2004 <20040105/UP>
FILE COVERS 1985 TO 2003

<<< CROPU IS A STATIC FILE WITH NO UPDATES >>>

FILE FSTA
FILE LAST UPDATED: 22 OCT 2007 <20071022/UP>
FILE COVERS 1969 TO DATE.

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>>> NEW EIGHT EDITION THESAURUS NOW AVAILABLE ONLINE <<<

FILE FROSTI
FILE LAST UPDATED: 24 OCT 2007 <20071024/UP>
FILE COVERS 1972 TO DATE.

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FILE LIFESCI
FILE COVERS 1978 TO 23 Oct 2007 (20071023/ED)